



Revised
Total Maximum Daily Load
for
Spring Creek
Dent County

Submitted: September 16, 2020
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Impairments: Dissolved Oxygen and Organic Sediment

WATER BODY SUMMARY
Total Maximum Daily Load for Spring Creek
Pollutants: Low dissolved oxygen and organic sediment

Name: Spring Creek¹

Location: Dent County near Salem

8-digit Hydrologic Unit Code (HUC):²

07140102 – Meramec

12-digit HUC Subwatershed:

071401020103 – Spring Creek

Water Body Identification Number (WBID) and Hydrologic Class:³

WBID 1870 – Class P



Designated Uses:⁴

Irrigation

Livestock and wildlife protection

Human health protection

Warm water habitat (aquatic life)

Whole body contact recreation category B

Secondary contact recreation

Impaired Use:

Warm water habitat (aquatic life)

Pollutants and Sources Identified on the 303(d) List:

Low dissolved oxygen – Point and nonpoint sources

Organic sediment – Salem Wastewater Treatment Facility

Length and Location of WBID 1870 and Impairment within WBID 1870:⁵

WBID 1870 -- 12.7 miles from mouth to Section 19, Township 34N, Range 05W

Impairment -- 7.4 miles from Section 2, Township 34N, Range 6W to Highway 32 (Section 19, Township 34N, Range 5W)

¹ The 2008 303(d) List of impaired waters incorrectly identified the stream name as Spring Branch (Creek).

² Watersheds are delineated by the U.S. Geological Survey using a nationwide system based on surface hydrologic features. This system divides the country into 2,270 8-digit hydrologic units (USGS2019). A hydrologic unit is a drainage area delineated to nest in a multilevel, hierarchical drainage system. A hydrologic unit code is the numerical identifier of a specific hydrologic unit consisting of a 2-digit sequence for each specific level within the delineation hierarchy (FGDC 2003).

³ For hydrologic classes see 10 CSR 20-7.031(1)(F). Class P streams maintain permanent flow even in drought periods.

⁴ For designated uses see 10 CSR 20-7.031(1)(C) and 10 CSR 20-7.031 Table H. Presumed uses are assigned per 10 CSR 20-7.031(2)(A) and (B) and are reflected in the Missouri Use Designation Dataset described at 10 CSR 20-7.031(2)(E).

⁵ The mileage of the impairment (7.4 miles) corresponds to the mileage of WBID 3708 as presented on the 2008 303(d) List. Once a separate water body segment, WBID 3708 was merged with WBID 1870 during revisions to Missouri's Water Quality Standards in 2009.

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1. Introduction

The Missouri Department of Natural Resources in accordance with Section 303(d) of the federal Clean Water Act is establishing this total maximum daily load (TMDL) to address the low dissolved oxygen and organic sediment impairments in Spring Creek near Salem in Dent County. This Revised TMDL supersedes the TMDL approved by the U.S. Environmental Protection Agency (EPA) on October 20, 2010, that was established to meet the milestones of the 2001 Consent Decree, *American Canoe Association, et al. v. EPA*, No. 98-1195-CV-W in consolidation with No. 98-4282-CV-W, February 27, 2001. Spring Creek was first listed on the 1994 Missouri 303(d) List of impaired waters for biochemical oxygen demand and a 0.3 mile section of Spring Creek was subsequently placed on the 1998 Missouri 303(d) List for biochemical oxygen demand and non-filterable residue from the Salem Wastewater Treatment Facility.⁶ Spring Creek was listed for volatile suspended solids and biochemical oxygen demand on the 2002 303(d) List, and these pollutants were changed to low dissolved oxygen and organic sediment on the combined 2004/2006 303(d) List. The length of the impairment was also changed from 0.3 miles to 7.4 miles on the combined 2004/2006 303(d) List. Spring Creek remained listed as impaired by these pollutants on the 2008 303(d) List.

Section 303(d) of the federal Clean Water Act and Title 40 of the Code of Federal Regulations (CFR) Part 130 require states to develop TMDLs for waters not meeting applicable water quality standards. Missouri's Water Quality Standards at Title 10 of the Code of State Regulations (CSR) Division 20 Chapter 7, Rule .031 consist of three major components: designated uses, water quality criteria to protect those uses, and an antidegradation policy. The purpose of a TMDL is to determine the loading capacity of a specific pollutant that a water body can assimilate without exceeding the applicable Water Quality Standards for that water body. The TMDL process quantitatively assesses impairment factors so that water quality-based controls can be established to reduce pollutant loading and to restore and protect the quality of Missouri's water resources. Based on the relationship between pollutant sources and in-stream water quality conditions, a TMDL is the sum of a wasteload allocation and a load allocation (40 CFR 130.2) with a margin of safety (Clean Water Act section 303(d)(1)(C)). The wasteload allocation is the fraction of the loading capacity apportioned to existing or future point sources. The load allocation is the fraction of the loading capacity apportioned to existing or future nonpoint sources and natural background. The margin of safety is a portion of the TMDL that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR 130.7), any uncertainty associated with the model assumptions, and data inadequacies.

2. Rationale for Revision

A review of the QUAL2K model used to develop the 2010 TMDL revealed that the 2008 water quality dataset used to calibrate the 2010 QUAL2K model included only dissolved oxygen data measured during late morning to midafternoon periods when dissolved oxygen concentrations in the stream are elevated due to reaeration from photosynthetic processes. Such measurements are not representative of the critical conditions in Spring Creek when low dissolved oxygen is likely to occur. Instead, critically low dissolved oxygen concentrations occur in the early morning when

⁶ The Department maintains current and past 303(d) lists and corresponding assessment worksheets online at dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters.

biological respiration processes have consumed the oxygen generated by daytime photosynthesis. Due to these incorrect model inputs used during the development of the 2010 TMDL, a reevaluation of the calculated loading capacity and associated allocations necessary to attain water quality standards is warranted.

The 2010 Spring Creek TMDL established total nitrogen (TN) and total phosphorus (TP) wasteload and load allocations based on EPA Level III Ecoregion 39 criteria (USEPA 2000). However, the Ecoregion 39 nutrient criteria targets were developed based on streams in pristine or near-pristine environments, and may not be representative of more localized reference conditions. The targets are not tied to specific biological conditions or Missouri's minimum dissolved oxygen criterion. Additionally, these federally recommended nutrient criteria use a statistic-based distributional approach that has little or no linkage to biological "cause and effect" responses or ecologically significant thresholds, and merely represents an administrative water quality protection policy that guides EPA's clean water programs. For these reasons, these targets may not be appropriate metrics for use as wasteload allocations for point source discharge from wastewater treatment facilities. The Department has revised the Spring Creek TMDL based on critical low flow dissolved oxygen data and has established pollutant targets that are proportionate to the existing land uses and geomorphic characteristics of Spring Creek and its contributing watershed. The pollutant targets in the revised TMDL have been established such that the 5.0 milligrams per liter (mg/L) minimum criterion for dissolved oxygen will be achieved, and organic sediment will be reduced to ensure conditions are consistent with Missouri's general narrative water quality criteria. Such targets will result in restoration of the protection of warm water habitat (aquatic life) designated use in Spring Creek and will be protective of downstream uses.

The targets and information provided in this revised TMDL replace those found in the 2010 TMDL. The ultimate endpoint for this revised TMDL will be to meet Missouri Water Quality Standards through attainment of the minimum dissolved oxygen criterion for the protection of aquatic life in warm water habitats of 5.0 mg/L and general criteria associated with excessive sedimentation. Compliance with these criteria will be determined in accordance with Department assessment procedures for federal Clean Water Act sections 305(b) and 303(d) reporting. All pollutant reductions necessary to achieve the TMDL targets calculated in this revised TMDL shall be implemented until such a point that water quality standards are attained. If all point source and nonpoint source pollutant targets are achieved, but water quality standards are not attained, then additional monitoring will be scheduled and the TMDL may be further revised.

3. Water Body and Watershed Descriptions

Spring Creek is located in southeast Missouri within the Meramec subbasin, which is catalogued by the U.S. Geological Survey (USGS) as the 8-digit hydrologic unit code (HUC) 07140102. Spring Creek is an 18-mile long stream located in the Spring Creek 12-digit HUC (071401020103) subwatershed, which drains approximately 44.9 square miles. The stream originates approximately 4 miles South of Salem, flows northwest around and through the city of Salem, and eventually into Dry Fork. An approximately 12.7-mile section of Spring Creek from Highway 32 to the confluence with Dry Fork is identified as water body identification (WBID) 1870 in Missouri's Water Quality Standards. The 2004/2006 and 2008 303(d) Lists identify 7.4 miles of WBID 1870 from Highway 32 to approximately 5 miles below the Salem Wastewater Treatment Facility as impaired due to low dissolved oxygen. The entire 12.7-mile portion of Spring Creek is the subject of this revised TMDL. The Spring Creek 12-digit watershed is presented in Figure 1.

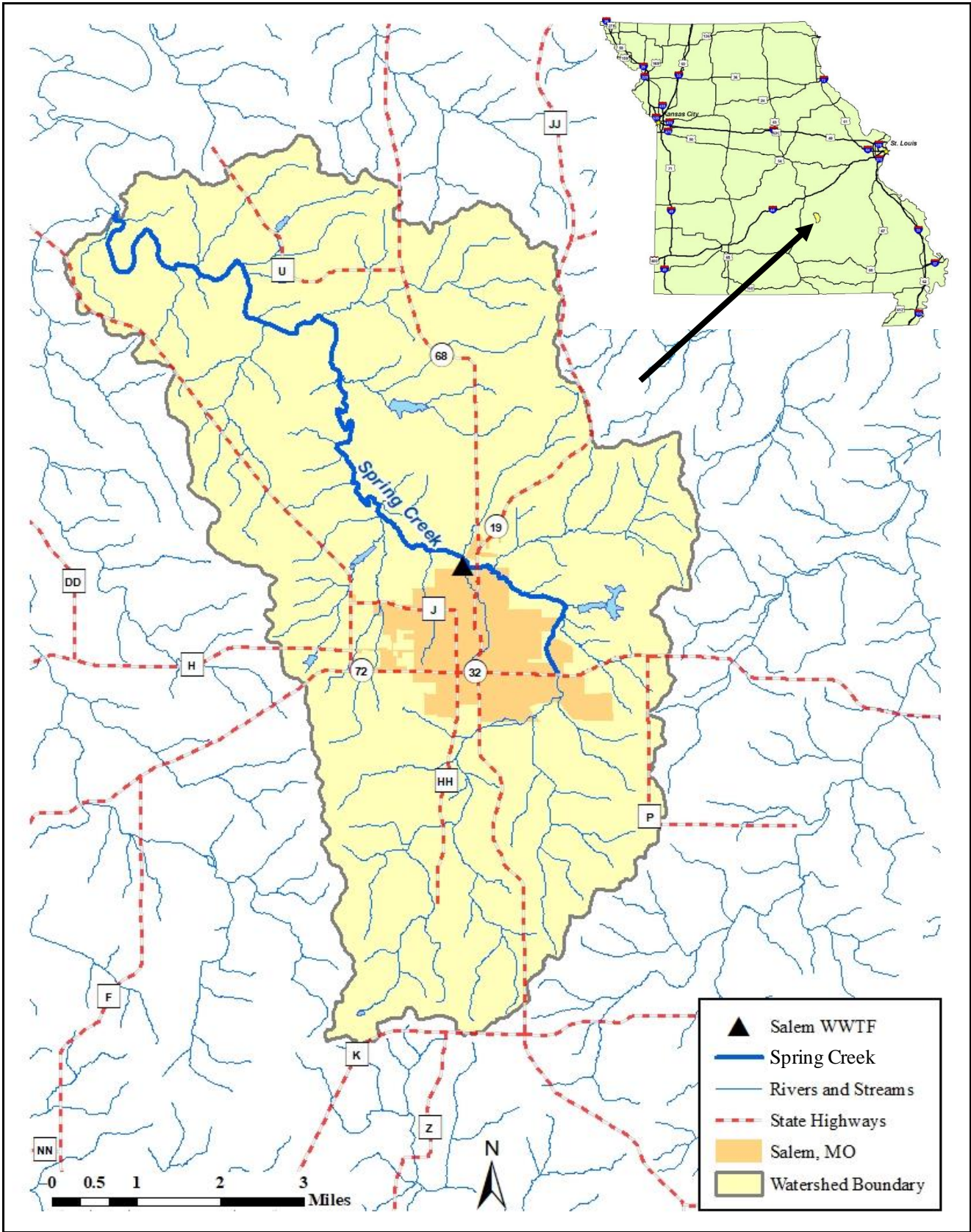


Figure 1. Spring Creek Watershed

3.1 Geology, Physiography and Soils

The Spring Creek watershed is located in the Ozark Highlands Level IV Ecoregion. The Ozark Highlands Ecoregion is characterized by irregular physiography with steep slopes near the large streams and moderate relief hills on the broad plateaus or inter-stream areas. Soils are generally rocky and cultivated land is mainly confined to small tracts in the valleys and creek bottoms while cleared upland is used for pasture and livestock (Chapman et al. 2002). The Spring Creek watershed is in the center of Missouri's karst topography region. Karst refers to areas in which soluble rock, such as limestone or dolomite, develops caves and underground conduits for water. Water enters these conduits through losing streams⁷ and sinkholes.⁸ The Spring Creek watershed contains 61 documented sinkholes and 11 documented springs. As displayed on Figure 2, the majority of the sinkholes occur in the upper reaches of the watershed while the springs tend to occur further downstream near the main channel of Spring Creek.

The Spring Creek watershed is also located within the Meramec ecological drainage unit (EDU). Ecological drainage units are groups of watersheds that have similar biota, geography, and climate characteristics. The Meramec ecological drainage unit includes all of the tributaries to the Meramec River, and extends to the confluence of the Meramec and Mississippi Rivers. The landscape where Spring Creek is located consists of generally gentle slopes that steepen near major drainage divides. Sinkholes and springs are present in the landscape and streams are often intermittent or ephemeral (MoRAP 2005).

Spring Creek is in the Nixa-Clarksville-Lebanon-Hobson Soil Association (USDA 1971). This soil association contains gentle to moderately steep slopes, somewhat excessively to moderately well-drained soils with a fragipan, cherty subsoil or both. In the bottomlands along Spring Creek are Sharon silt loam, Westerville silt loam, and Atkins loam. They all are level or nearly level. Sharon silt loam is prone to flooding and is found in the bottoms. Westerville silt loam is found in depressions in the floodplains. Coulstone-Clarksville cherty soils, with 2 to 30 percent slopes, are found on the shoulders of slopes and occupy the steep side slopes and narrow ridges in the highly dissected parts of Dent County. These soils are formed in weathered sandstone. Nixa-Clarksville cherty loams, with 5 to 19 percent slopes, are also found on side slopes. The steeper slopes (14 to 19 percent) have a cherty fragipan. Along the broad ridgetops are the Lebanon-Hobson silt loams, with slopes of 2 to 9 that are moderately well-drained, droughty and susceptible to erosion.

As presented in Table 1, the predominant soils in the contributing watershed consist of silt loam and gravelly silt loam. Although soils in the watershed are varied, they can be categorized based on similar runoff potentials into hydrologic soil groups. A hydrologic soil group indicates the rate at which water enters the soil profile under conditions of a bare, thoroughly wetted soil surface, which in turn may affect the potential amount of water entering the stream as runoff (NRCS 2009). Group A represents soils with the highest rate of infiltration and the lowest runoff potential. Group D soils have the lowest rate of infiltration and the highest potential for runoff. Group C soils have a low-moderate rate of infiltration and a moderate-high potential for runoff. Dual soil groups (e.g., B/D) account for the presence of a high water table by providing both the drained and undrained

⁷ A losing stream is one which distributes [loses] thirty percent or more of its flow into a bedrock aquifer. These losses would be during low flow conditions and through natural processes, such as through permeable geologic materials.

⁸ A sinkhole or sink is a collapsed portion of bedrock above a void. Sinks may be a sheer vertical opening into a cave, or a shallow depression of many acres.

condition of the soil.⁹ Table 2 provides a summary of the hydrologic soils groups in the Spring Creek watershed and Figure 2 shows their distribution.

Table 1. Predominant Soils in the Spring Creek Watershed (NRCS 2017)

Soil Type	Description	Hydrologic Soil Group	Percentage of Watershed (%)
Lebanon and Hobson silt loams	1 to 15 percent slopes	D	43.0
Nixa-Clarksville complex	1 to 20 percent slopes	D	35.5
Westerville silt loam	0 to 3 percent slopes, occasionally flooded	C/D	6.0
Coulstone-Clarksville complex	3 to 35 percent slopes, very stony	A	4.1
Sharon silt loam	0 to 2 percent slopes, occasionally flooded	C	3.4
Atkins loam	0 to 3 percent slopes, frequently flooded	B/D	2.7
Midco gravelly loam	0 to 3 percent slopes, frequently flooded	A	1.7
Possumtrot fine sandy loam	0 to 3 percent slopes, occasionally flooded	A	1.5

Table 2. Summary of Hydrologic Soil Groups in the Spring Creek Watershed (NRCS 2009)

Hydrologic Soil Group	Area (mi ²)	Area (%)
Not Rated (Open Water)	0.20	0.4
A	3.30	7.3
B	0.51	1.1
B/D	1.20	2.7
C	1.51	3.4
C/D	3.50	7.8
D	34.74	77.3
Total	44.94	100.0

⁹ For the purpose of hydrologic soil groups, adequately drained means that the seasonal high water table is kept at least 24 inches (60 centimeters) below the surface in a soil where it would be higher in a natural state (NRCS 2009).

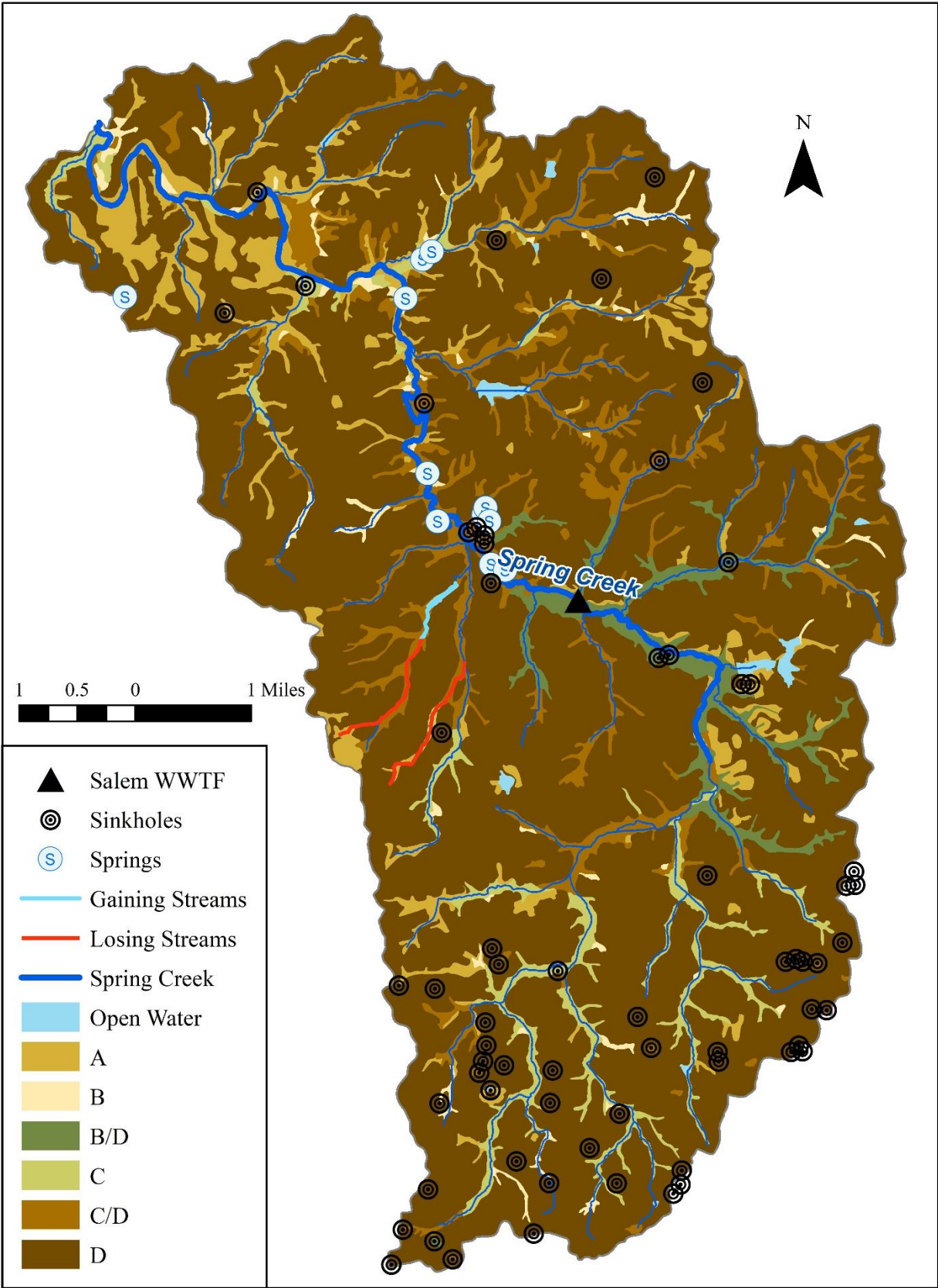


Figure 2. Hydrologic Soil Groups in the Spring Creek Watershed, 12-digit HUC 071401020103

3.2 Climate

Climate normals are 30-year averages of climatological variables, including temperature and precipitation, produced by the National Centers for Environmental Information every 10 years (NOAA 2010). The monthly precipitation and temperature normals are calculated using daily weather data from the Salem weather station (Station No. USC00237506) and are representative of the climatic conditions in the Spring Creek watershed. Of the various climatic factors, precipitation is especially important as it is related to stream flow and runoff events that can influence the transport of pollutants from nonpoint sources into streams. Water quality data recorded in 2003 were used to model Spring Creek. Table 3 and Figures 3 and 4 compare 2003 temperature and precipitation data with the 30-year climate normal rainfall and temperature data observed at Salem Weather Station. The U.S. Drought Monitor (University of Nebraska 2019) determined that the Meramec HUC-8 experienced moderate drought in August 2003, but was generally not in drought conditions the remaining months of the year.

Table 3. Comparison of Climate Normals and 2003 Data at the Salem Weather Station No. USC00237506 (NOAA 2010)

Month	Precipitation (inches)		Mean Max. Temp. (°F)		Mean Min. Temp. (°F)	
	Normal	2003	Normal	2003	Normal	2003
January	2.54	0.57	44.5	41.5	23.4	20.6
February	2.64	3.16	49.6	43.2	27.3	25.1
March	4	2.56	59.6	59.9	36.3	36.2
April	4.47	4.13	70	70.9	46.1	47.5
May	5.39	4.50	77.6	75.9	55	52.6
June	4.2	*3.31	85.2	*85.4	63.1	*63.8
July	3.55	3.69	89.6	89.2	67.6	66.9
August	4.01	2.59	89.6	91.9	66.2	66.9
September	4.42	3.52	81.2	77.2	57.6	53.5
October	3.87	2.73	70.7	71.1	47.1	47.7
November	4.54	5.17	58.6	60.1	37.3	41.2
December	3.54	2.46	46.1	47.2	26.5	30.7
	Total		Average		Average	
	47.17	38.39	68.53	67.79	46.13	46.06

*Weather data were not reported in June 2003, so values from 2002 were used

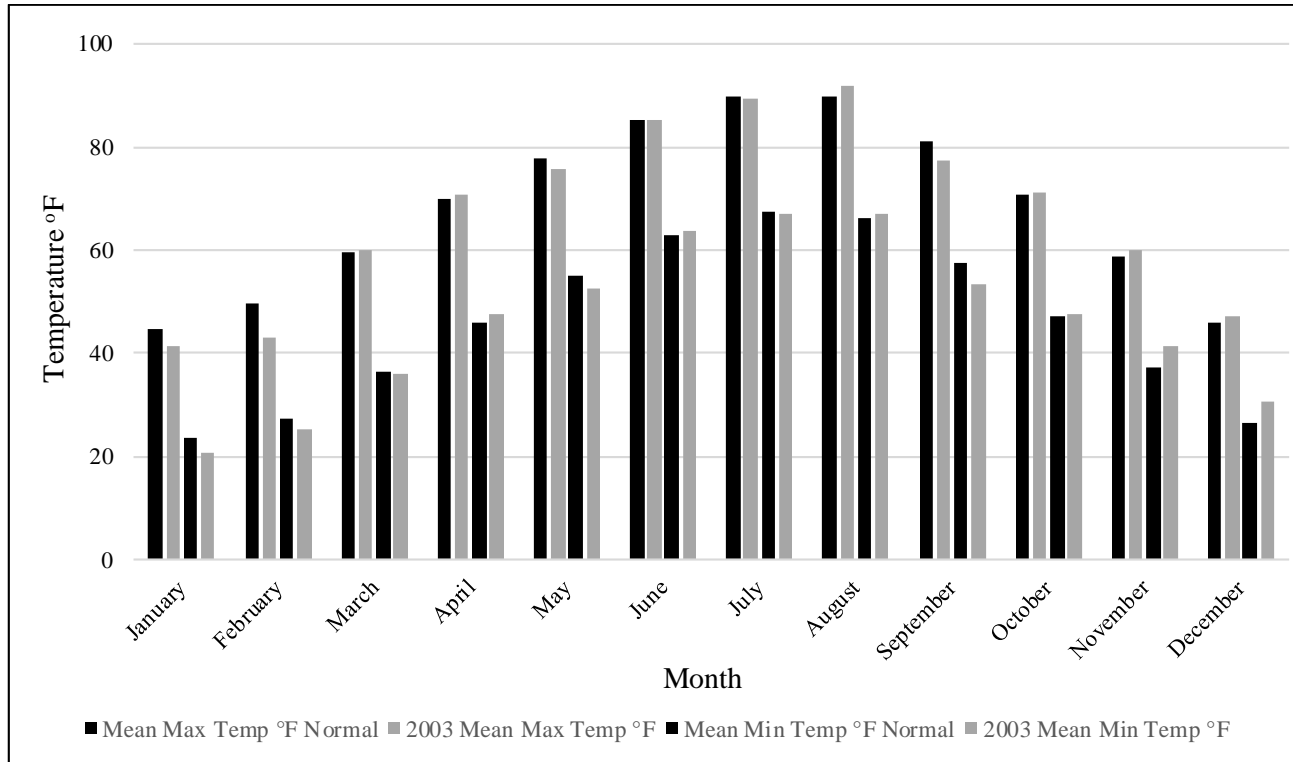


Figure 3. Comparison of Climate Normal and 2003 Average Monthly Minimum and Maximum Temperatures

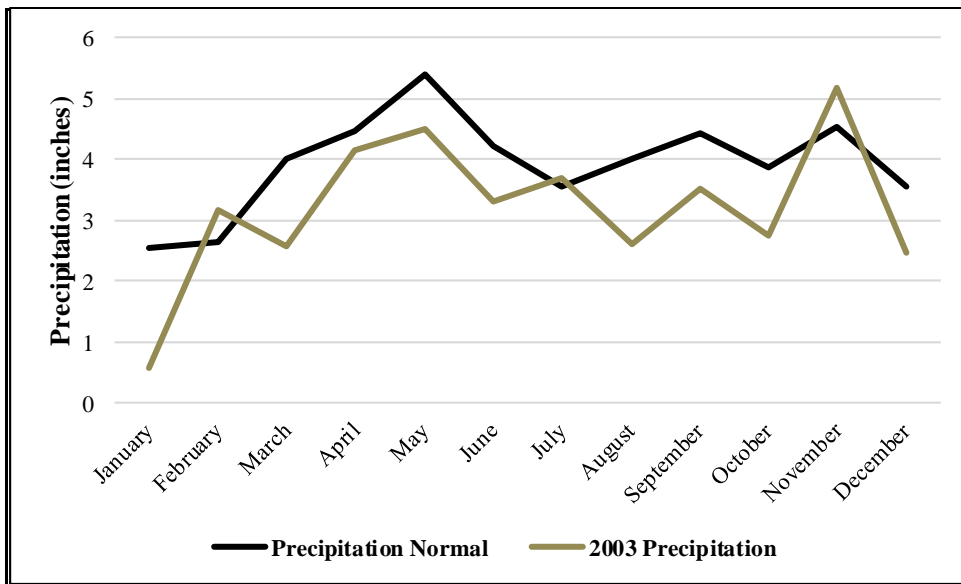


Figure 4. Comparison of Climate Normal and 2003 Average Monthly Precipitation

3.3 Population

The population estimates presented in Table 4 were derived using Geographic Information System (GIS) software and superimposing the watershed boundary over a map of census blocks (Figure 5). Wherever the centroid of a census block fell within a watershed boundary, the entire population of the census block was included in the total. If the centroid of the census block was outside the boundary, then the population of the entire block was excluded. Using a similar method, the municipal population was estimated by superimposing municipal areas over the map of census blocks (U.S. Census Bureau 2010).

Table 4. Population Estimates for the Spring Creek Watershed

Municipal Population			Rural Population			Total Population		
1990	2000	2010	1990	2000	2010	1990	2000	2010
4,689	4,951	5,027	2,272	2,455	2,445	6,961	7,406	7,472

In 2013, EPA completed a separate population analysis based on 12-digit HUC subwatersheds for purposes unrelated to this TMDL. They used demographic and census block data, and a web-based tool called EJSCREEN, to determine areas of Missouri having potential Environmental Justice concerns. EPA defines Environmental Justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental Justice communities may qualify for financial and strategic assistance for addressing environmental and public health issues. From this analysis, EPA determined that the Spring Creek watershed has some potential environmental justice concerns (5 to 15 percent area).

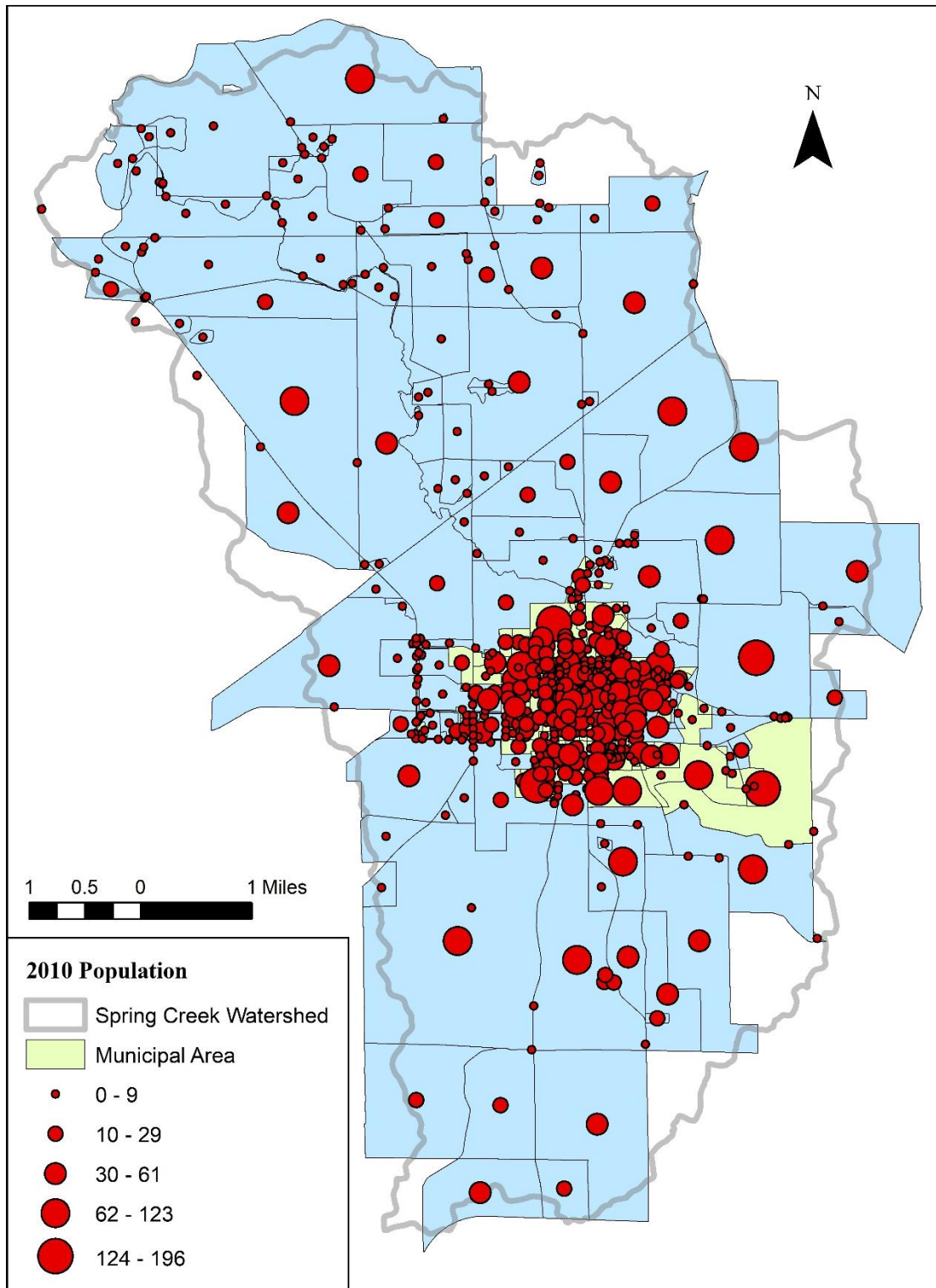


Figure 5. Population Density in the Spring Creek Watershed, 12-digit HUC 071401020103

3.4 Land Cover

A land cover analysis was completed using the 2011 National Land Cover Database (NLCD) published by the USGS (Homer et al. 2015). Land cover area in the Spring Creek watershed is summarized in Table 5 and presented in Figure 6. The total amount of developed area in the Spring Creek watershed is approximately 11.2 percent. Impervious surfaces associated with the developed land cover types ranges from less than 20 percent to greater than 79 percent. Stream degradation associated with impervious surfaces has been shown to first occur at about 10 percent impervious and increases in severity as imperviousness increases (Arnold and Gibbons 1996; Schueler 1994). Hay and pasture land covers 44.8 percent of the Spring Creek watershed and is generally found adjacent to Spring Creek and its tributaries. Forested land covers 41.8 percent of the watershed and tends to occur on steeper slopes and ridges.

Table 5. Land Cover in the Spring Creek Watershed (NLCD, 2011)

Land Cover	Acres	Square Miles	Percent
Developed, Open Space	1782	2.784	6.20%
Developed, Low Intensity	1088	1.7	3.78%
Developed, Medium Intensity	280	0.437	0.97%
Developed, High Intensity	80	0.1254	0.28%
Barren	2	0.004	0.0%
Cultivated Crops	39	0.061	0.1%
Hay and Pasture	12,895	20.100	44.8%
Forest	12,012	18.800	41.8%
Shrub and Herbaceous	430	0.672	1.5%
Wetland	55	0.086	0.2%
Open Water	93	0.145	0.3%
Total	28,756	44.918	100%

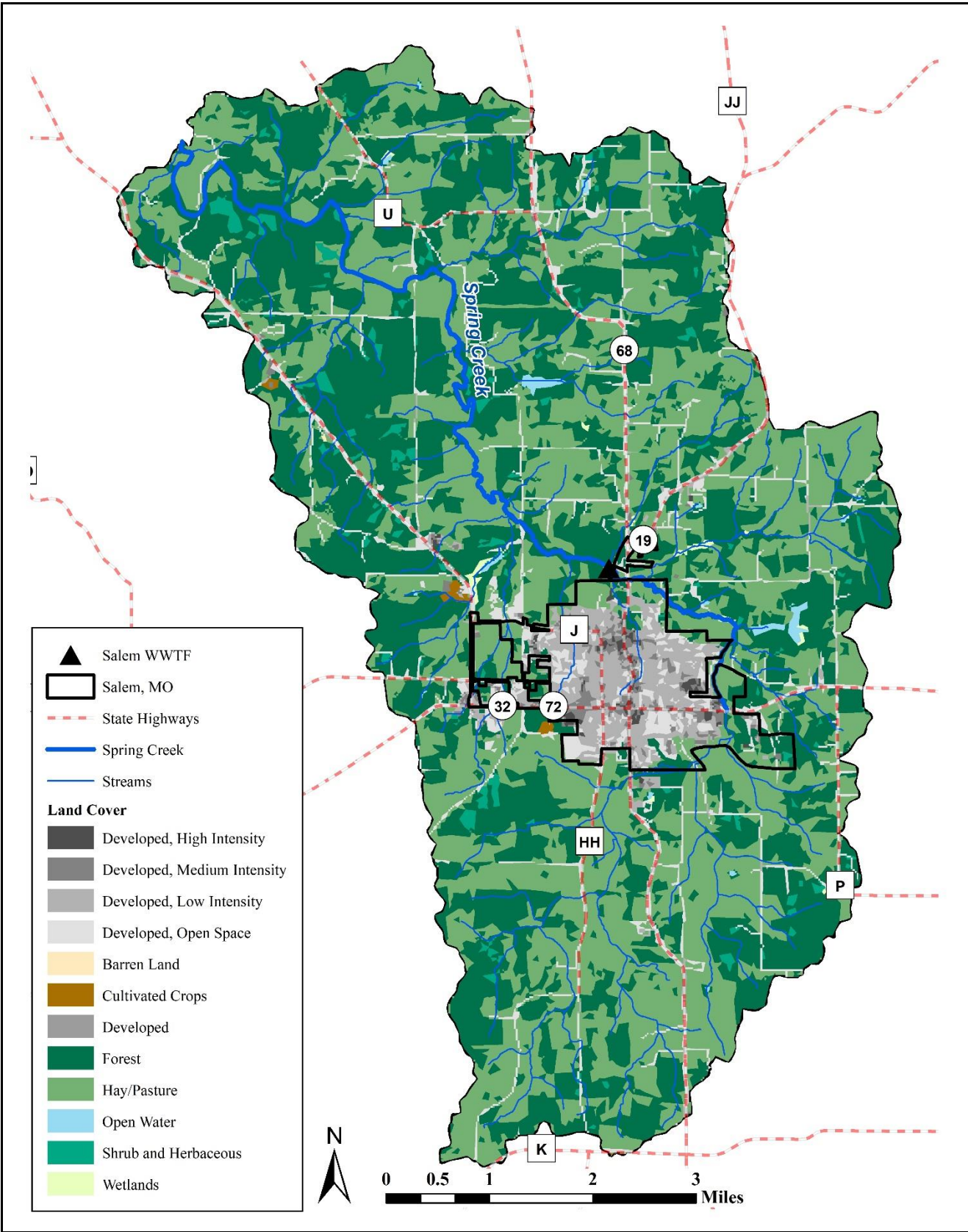


Figure 6. Land Cover in the Spring Creek Watershed, 12-digit HUC 071401020103

4. Applicable Water Quality Standards

The purpose of developing a TMDL is to identify the maximum pollutant loading that a water body can assimilate and still attain and maintain water quality standards. Water quality standards are therefore central to the TMDL development process. Under the federal Clean Water Act, every state must adopt water quality standards to protect, maintain, and improve the quality of the nation's surface waters (U.S. Code Title 33, Chapter 26, Subchapter III). Water quality standards consist of three major components: designated uses, water quality criteria, and an antidegradation policy.

Per federal regulations at 40 CFR 131.10, the designated uses and criteria to protect those uses assigned to a water body shall provide for the attainment and maintenance of the water quality standards of downstream waters. The components of Missouri's Water Quality Standards discussed in this section meet these requirements and are approved by the EPA. It is not the purview of a TMDL to revise existing water quality standards. In the event that future water quality monitoring demonstrates that water quality standards are not protective of downstream uses, the federal Clean Water Act provides means to address the situation. Such means are described in the EPA's Water Quality Standards Handbook.¹⁰

4.1 Designated Uses

Designated uses for a water body are defined in Missouri's Water Quality Standards at 10 CSR 20-7.031(1)(C) and assigned per 10 CSR 20-7.031(2) and Table H. These uses must be maintained in accordance with the federal Clean Water Act. The impaired segment of Spring Creek has been assigned the following designated uses as described at 10 CSR 20-7.031(2)(E):

- Irrigation;
- Livestock and wildlife protection;
- Human health protection;
- Warm water habitat (aquatic life);
- Whole body contact recreation Category B; and
- Secondary contact recreation.

Spring Creek is impaired due to nonattainment of the warm water habitat (aquatic life) use.

4.2 Water Quality Criteria

Water quality criteria are limits on certain chemicals or conditions in a water body to protect particular designated uses. Water quality criteria can be expressed as specific numeric criteria or as general narrative statements. Missouri 10 CSR 20-7.031(4) and (5) establish General Criteria applicable to all waters of the state at all times and Specific Criteria applicable to waters contained in 10 CSR 20-7.031 Tables G (Lakes) and H (Streams). Available data and field observations note water quality violations of general criteria associated with sediment loading as well as violations of the specific criterion for minimum dissolved oxygen concentrations in warm water habitats.

Excessive sediment deposition, either organic or inorganic, that results in bottom deposits that harm aquatic life or otherwise prevent the full maintenance of beneficial uses are violations of the general criteria specified at 10 CSR 20-7.031(4)(A) and (C). For streams designated for the protection of

¹⁰ <https://www.epa.gov/wqs-tech/water-quality-standards-handbook>

aquatic life associated with the warm water habitat use, Table A1 of 10 CSR 20-7.031 specifies a minimum criterion of 5.0 mg/L of dissolved oxygen.

The ultimate endpoint for this revised TMDL will be to meet Missouri Water Quality Standards through attainment of the minimum dissolved oxygen criterion of 5.0 mg/L and attainment of general criteria associated with waters free from excessive sedimentation. Compliance with these criteria will be determined in accordance with Department assessment procedures for federal Clean Water Act sections 305(b) and 303(d) reporting.

4.3 Antidegradation Policy

Missouri's Water Quality Standards include the EPA "three-tiered" approach to antidegradation, and may be found at 10 CSR 20-7.031(3).

Tier 1 – Protects public health, existing instream water uses, and a level of water quality necessary to maintain and protect existing uses. Tier 1 provides the absolute floor of water quality for all waters of the United States. Existing instream water uses are those uses that were attained on or after November 28, 1975, the date of EPA's first Water Quality Standards Regulation.

Tier 2 – Protects and maintains the existing level of water quality where it is better than applicable water quality criteria. Before water quality in Tier 2 waters can be lowered, there must be an antidegradation review consisting of: (1) a finding that it is necessary to accommodate important economic and social development in the area where the waters are located; (2) full satisfaction of all intergovernmental coordination and public participation provisions; and (3) assurance that the highest statutory and regulatory requirements for point sources and best management practices for nonpoint sources are achieved. Furthermore, water quality may not be lowered to less than the level necessary to fully protect "fishable/swimmable" uses and other existing uses.

Tier 3 – Protects the quality of outstanding national and state resource waters, such as waters of national and state parks, wildlife refuges and waters of exceptional recreational or ecological significance. There may be no new or increased discharges to these waters and no new or increased discharges to tributaries of these waters that would result in lower water quality.

Waters in which a pollutant is at, near, or exceeds the water quality criteria are considered in Tier 1 status for that pollutant. Therefore, the antidegradation goal for Spring Creek is to restore water quality to levels that meet the water quality standards.

5. Defining the Problem

Water quality monitoring was conducted in Spring Creek in 1985, 2003, and 2008. The 1985 water quality study indicated deposition of solids (sludge) and low levels of dissolved oxygen downstream of the Salem Wastewater Treatment Facility. As a result, Spring Creek was listed on Missouri's 1994 303(d) List of impaired waters for biochemical oxygen demand and non-filterable residue. Biochemical oxygen demand is the measure of oxygen used by microorganisms to decompose organic matter. In 2002, the listing for non-filterable residue was changed to volatile suspended solids. This change was made to better distinguish between organic (volatile) suspended solids coming from wastewater treatment plants rather than mineral solids (soil or mineral particles) coming from soil erosion (non-volatile suspended solids).

In-stream dissolved oxygen and biochemical oxygen demand are affected by water temperature, the amount of decaying matter (i.e., organic sediment containing nutrients and oxygen consuming substances) in the stream, nutrient transport into streams from overland runoff, turbulence at the air-water interface, and the amount of photosynthesis occurring in plants within the stream. Nutrients (i.e., nitrogen and phosphorus) enter streams from wastewater effluent as well as from stormwater runoff. Benthic algae that adheres to large in-stream substrate can exert an influence on oxygen demand that results in wide daily dissolved oxygen fluctuations. Decaying matter can also accumulate on the bottom of a stream and cause sediment oxygen demand. Sediment oxygen demand is a combination of all of the oxygen-consuming processes that occur at or just below the sediment-water interface. Most of the sediment oxygen demand at the surface of the sediment is due to the biological decomposition of organic material and the bacterially facilitated nitrification of ammonia-nitrogen ($\text{NH}_4\text{-N}$).

Although currently defined as a single water body segment, WBID 1870, Spring Creek was divided into two segments, WBID 3708 and WBID 1870, as part of the 2005 revisions to Missouri's Water Quality Standards. The impaired portion of Spring Creek extends downstream from highway 32 for 7.4 miles and corresponds to WBID 3708, which was listed on the 2008 303(d) List. This impaired portion of Spring Creek includes the upstream end of Spring Creek WBID 1870 as currently defined in Table H of Missouri's Water Quality Standards, downstream to the confluence of an unnamed tributary approximately 0.1 mile southwest of County Road 3220. Any water quality targets and pollutant reductions established in this revised TMDL to restore water quality in this impaired portion will also be protective of, and continue to maintain, attainment of water quality standards for the remaining downstream portions of WBID 1870 and other downstream waters. Water quality data from the impaired segment of Spring Creek, that were used in modeling for TMDL development (Section 7), are provided in Table 6. Locations of water quality sampling sites and major tributaries are presented in Figure 7.

Table 6. August 27, 2003, Water Quality Data in the Impaired Segment of Spring Creek*

Site Code	Location	Date	Time	Temp. (°C)	DO (mg/L)	TKN (mg/L)	NO ₃ (mg/L)	TP (mg/L)
Sample Point 1 (M1)								
1870/9.8	Spring Cr. 0.1 mi. above Salem WWTF	8/27	6:10 am	24.0	5.4	0.33	0.29	0.06
1870/9.8	Spring Cr. 0.1 mi. above Salem WWTF	8/27	1:00 pm	27.0	18.8	0.32	0.23	0.07
Sample Point 2 (M2)								
1870/9/9	Salem WWTF outfall	8/27	6:00 am	24.0	3.00	No data	No data	No data
1870/9/9	Salem WWTF outfall	8/27	12:50 pm	30.0	5.70	1.33	16.6	0.49
Sample Point 3 (M3)								
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTF	8/27	6:30 am	21.0	5.1	0.51	7.13	4.38
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTF	8/27	1:15 pm	22.0	6.6	0.3	6.94	1.19
Sample Point 4 (M4)								
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTF	8/27	6:50 am	23.5	4.8	0.53	3.76	0.45
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTF	8/27	1:00 pm	24.0	6.4	0.65	3.52	0.44
Sample Point 5 (M5)								
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTF	8/27	6:25 am	23.0	5.0	0.25	3.13	0.38
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTF	8/27	1:30 pm	24.0	6.6	0.57	3.06	0.35

* Temp. – temperature; DO – dissolved oxygen; TKN – total kjeldahl nitrogen; NO₃ – nitrate; and TP – total phosphorus; WWTF – wastewater treatment facility

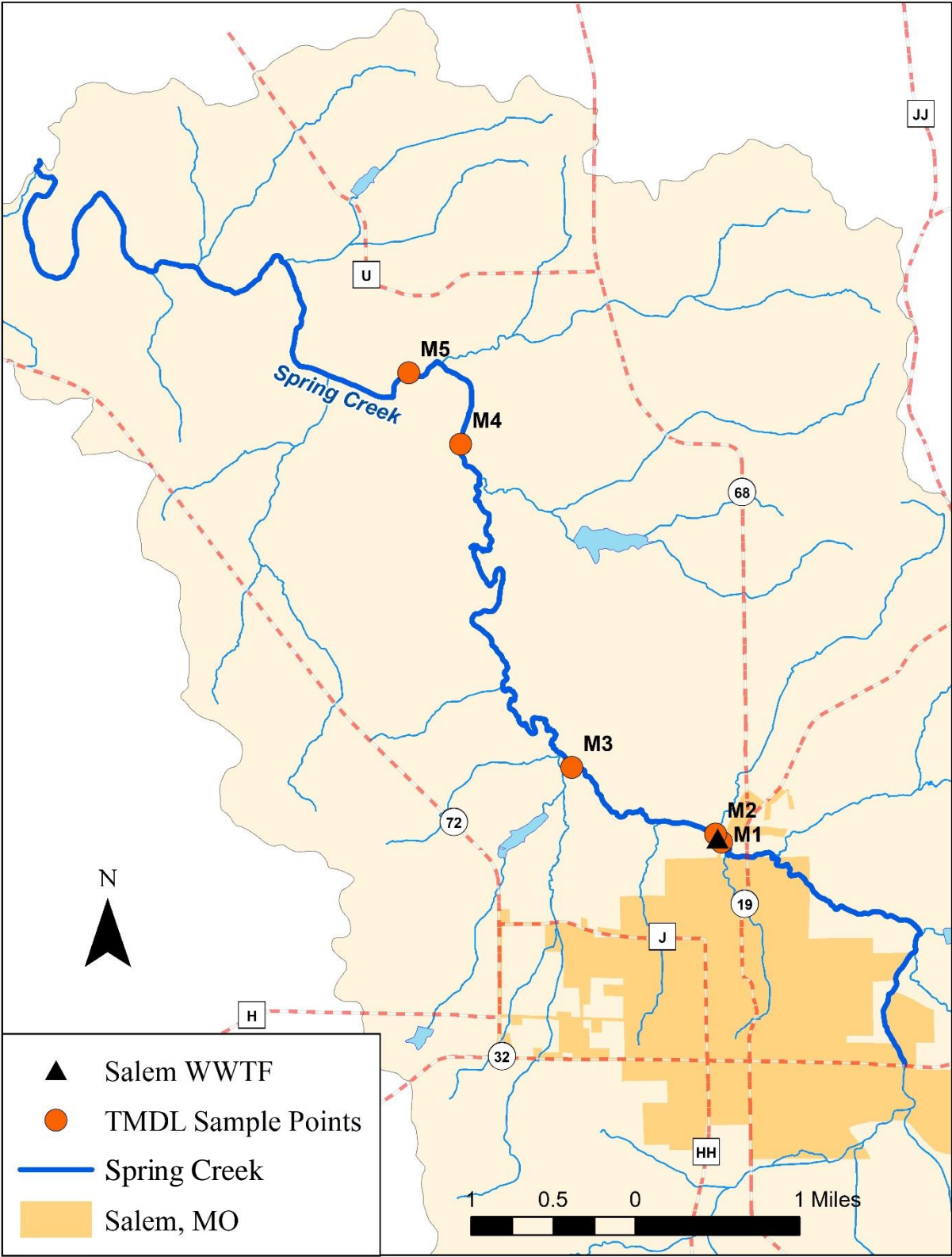


Figure 7. Spring Creek Water Quality Sample Sites

6. Source Inventory and Assessment

Various sources may be contributing pollutant loading to Spring Creek that impacts in-stream dissolved oxygen concentrations. For this reason, a source inventory and assessment is included in this TMDL report to identify and characterize known, suspected, and potential sources of pollutant loading to Spring Creek. These sources are categorized as being either point (regulated) or nonpoint (unregulated).

6.1 Point Sources

Point sources are defined under Section 502(14) of the federal Clean Water Act and are typically regulated through the Missouri State Operating Permit program.¹¹ Point sources include any discernible, confined, and discrete conveyance, such as a pipe, ditch, channel, tunnel, or conduit, by which pollutants are transported to a water body. Under this definition, permitted point sources include site-specific permitted municipal and domestic wastewater dischargers, site-specific permitted industrial and non-domestic wastewater dischargers, concentrated animal feeding operations (CAFOs), municipal separate storm sewer systems (MS4s), and general wastewater and stormwater permitted entities. In addition to these permitted sources, illicit straight pipe discharges, which are illegal and therefore unpermitted, are also point sources. As presented in Figure 8, point sources in the Spring Creek watershed include one municipal and one domestic wastewater treatment facility with site-specific permits, seven general permitted dischargers, and nine permitted stormwater dischargers.¹² There are no CAFOs, MS4s, or site-specific permitted industrial or non-domestic dischargers in the Spring Creek watershed.

¹¹ The Missouri State Operating Permit Program is Missouri's program for administering the federal National Pollutant Discharge Elimination System (NPDES) program. The NPDES program requires all point sources that discharge pollutants to waters of the United States to obtain a permit. Issued and proposed operating permits are available online at <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees>.

¹² Two facilities included in the original 2010 TMDL, Salem Memorial District Hospital (MO-0087076) and Seville Care Center (MO-0089974) now operate under general permits (MOG). One facility included in the original TMDL, The Commons (MO-0126021) no longer operates in the watershed and its permit has been terminated.

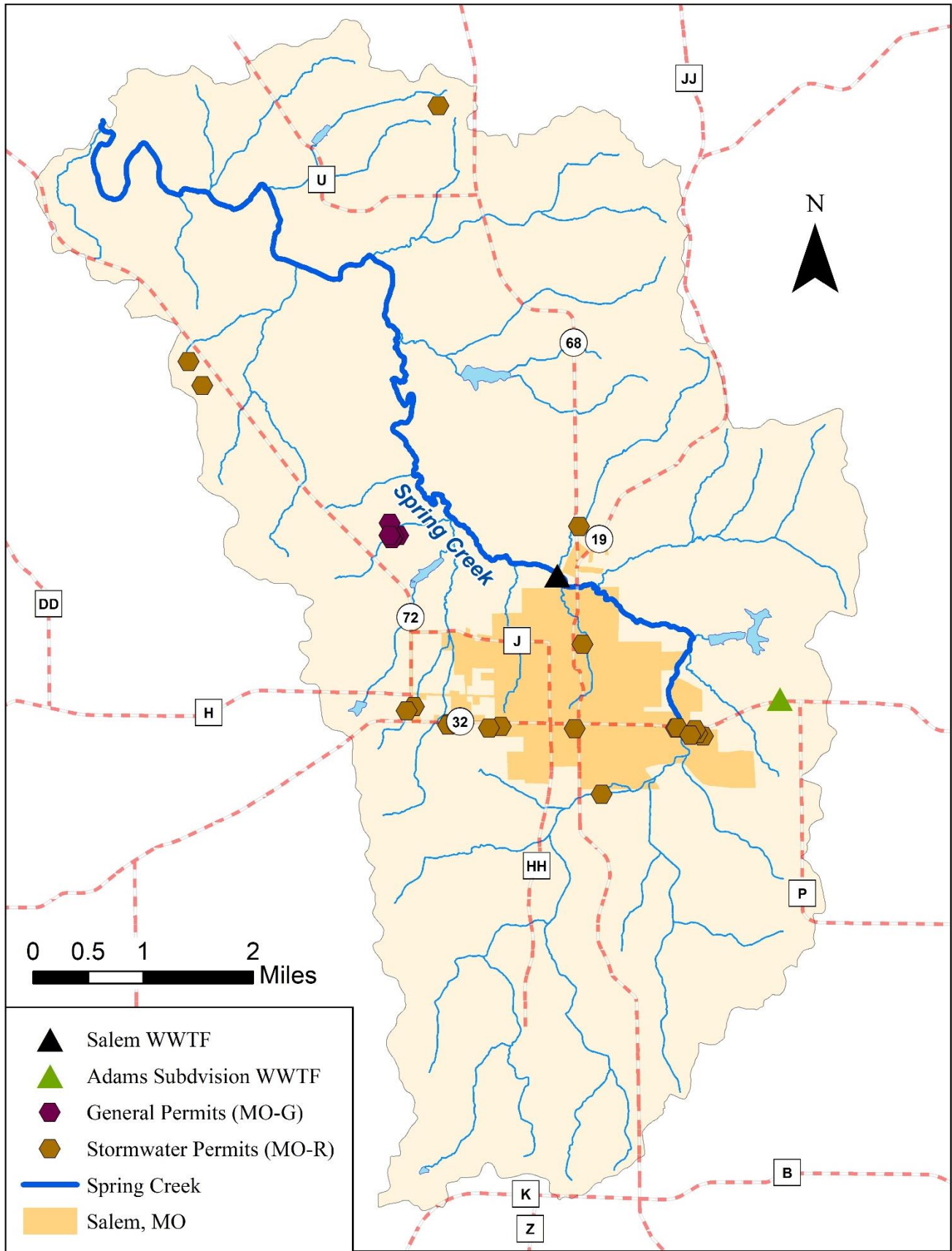


Figure 8. Point Sources in the Spring Creek Watershed

6.1.1 Municipal and Domestic Wastewater Discharge Permits

Dischargers of domestic wastewater include both publicly owned municipal wastewater treatment facilities and private non-municipal treatment facilities. Domestic wastewater is primarily household waste, including graywater and sewage. Untreated or inadequately treated discharges of domestic wastewater can be significant sources of biochemical oxygen demand, nitrogen, and phosphorus to receiving waters. Influences of pollutant loading from domestic dischargers are typically most evident at low-flow conditions when stormwater influences are lower or nonexistent.

The Salem Municipal Wastewater Treatment Facility (MO-0021768) is a minor municipal wastewater treatment facility with a design flow of 0.741 million gallons per day (MGD). Effluent from the Salem facility discharges directly to the impaired segment of Spring Creek. Water quality sampling and observations on Spring Creek conducted between 1985 and 2008 found low dissolved oxygen downstream of this facility. During low flows, effluent from the Salem facility constitutes approximately 90 percent of the flow in Spring Creek.

There is also one minor non-municipal wastewater treatment facility in the Spring Creek watershed, the Adams Subdivision Wastewater Treatment Facility (Table 7). The Adams Subdivision Association, Inc. (a small housing development) has a two-cell lagoon with a permit to discharge to a tributary to Spring Creek. The lagoons are a potential source of nutrients (and hence low dissolved oxygen) and need to be maintained. However, since the discharge is very small, the lagoons are not considered a significant source of the impairments.

Table 7. Minor Non-Municipal Wastewater Treatment Facilities

Facility	Permit No.	Design Flow (GPD)	Actual Flow (GPD)	Expires
Adams Subdivision WWTF	MO-0083984	9,000	1,960	12/31/2022

In addition to the direct discharges from domestic wastewater treatment facilities, potential pollutant contributions may also occur from overflows occurring from the adjoining sanitary sewer system. A sanitary sewer system is a wastewater collection system designed to convey domestic, commercial, and industrial wastewater to the treatment facility. This system can include limited amounts of inflow and infiltration from groundwater and stormwater, but it is not designed to collect large amounts of runoff from precipitation events. Untreated or partially treated discharge from a sanitary sewer system is referred to as a sanitary sewer overflow. Sanitary sewer overflows may result from blockages, line breaks, and sewer defects that allow excess stormwater and groundwater to enter and overload the collection system. Additionally, sanitary sewer overflows can result from lapses in sewer operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. Sanitary sewer overflows can occur during either dry or wet weather and at any point in the collection system including overflows from manholes or backups into private residences. Such overflows may discharge directly to nearby waterways, or may be restricted to terrestrial locations. These types of discharges are unauthorized by the federal Clean Water Act, and should remain rare, and be eliminated to the maximum extent possible.

According to a review of sanitary sewer overflow records, the Salem Wastewater Treatment Facility has reported overflows 178 times since 2014. The 178 reported overflows included some high precipitation events and associated stormwater runoff, which flooded manholes. Temporary stormwater inundation events may not contribute to dissolved oxygen impairments in Spring Creek. In accordance with 644.026.1.(15) RSMO and 40 CFR Part 122.41(e), the permittee is required to

develop and implement a program for maintenance and repair of collection systems. This requirement is implemented through a special permit condition or schedule of compliance. The Salem Wastewater Treatment Facility is under a schedule of compliance to reduce hydraulic overloading through system upgrades as necessary to maintain the protection of aquatic life in Spring Creek.

6.1.2 Site-Specific Industrial and Non-Domestic Wastewater Permits

Industrial and non-domestic facilities discharge wastewater resulting from non-sewage generating activities. There are no site-specific industrial or non-domestic wastewater permits in the Spring Creek watershed.

6.1.3 CAFO Permits

Concentrated animal feeding operations are animal feeding operations that confine and feed or maintain more than 1,000 animal units for 45 days or more during any 12-month period. Facilities with fewer animal units may be permitted as CAFOs if discharges occur or other water quality issues are discovered per 10 CSR 20-6.300. In Missouri, these types of facilities are permitted with either a site-specific permit or one of two available CAFO general permits. There are no CAFOs in the Spring Creek watershed.

6.1.4 Municipal Separate Storm Sewer System (MS4) Permits

An MS4 is a stormwater conveyance system owned by a public entity that is not a combined sewer or part of a sewage treatment plant. Federal regulations issued in 1990 require discharges from such systems to be regulated by permits if the population of a municipality, or in some cases a county, is 100,000 or more. In 1999, new federal regulations required permits for discharges from small MS4s that are located within a U.S. Census Bureau defined urban area or have otherwise been designated as needing a permit by the permitting authority. Pollutant loading from these areas would be similar to nonpoint sources occurring through stormwater runoff (e.g., fertilizers from lawns, erosion, and yard debris) and potentially from sanitary sewer overflows entering the system. Although stormwater discharges are often untreated, MS4 permit holders must develop, implement, and enforce stormwater management plans to reduce the contamination of stormwater runoff and prohibit illicit discharges. These plans must include measurable goals, be reported on annually, and meet six minimum control measures. These six minimum control measures are public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention. There are no applicable MS4 permits in the Spring Creek watershed.

6.1.5 General Wastewater and Non-MS4 Stormwater Permits

General and stormwater permits are issued based on the type of activity occurring and are intended to be flexible enough to allow for ease and speed of issuance, while providing the required protection of water quality. General and stormwater permits are issued for activities similar enough to be covered by a single set of requirements and are designated with permit numbers beginning with “MO-G” or “MO-R,” respectively.

Facilities in the Spring Creek watershed operate under the following General permits, as presented in Table 8:

- MO-G35 Stormwater discharges from facilities with above ground storage capacity of pre-consumer or post-consumer petroleum products totaling more than 20,000 gallons, but less than 250,000 gallons;
- MO-G49 Stormwater and other specified discharges from limestone and other rock quarries, concrete, glass, and asphalt industries; and
- MO-G823 No-discharge, private, domestic wastewater treatment facilities with design flows of less than 50,000 gallons per day.

Table 8. General Permits in the Spring Creek Watershed

Permit No.	Facility Name	Expires
MO-G350108	MFA Oil Company Salem Bulk Plant	9/17/2022
MO-G350261	MFA Oil Company Salem Petro Card	9/17/2022
MO-G350328	Salem Mobil	9/17/2022
MO-G490400	Kienstra 44 LLC – Salem	4/30/2022
MO-G491329	Dent County Concrete – Salem Plant	4/30/2022
MO-G823026	Salem Memorial District Hospital WWTF	8/24/2022
MO-G823044	Seville Care Center	8/24/2022

Facilities in the Spring Creek watershed operating under stormwater permits are presented in Table 9. Permits associated with construction or land disturbance activities (MO-RA) are temporary. The number of effective permits of this type may vary widely in any given year. Despite this variability, final TMDL targets and allocations do not vary as a result of any changes in the numbers of these types of permits.

Table 9. Stormwater Permits in the Spring Creek Watershed

Permit No.	Facility Name	Activity	Expires
MO-R203234	Heartland Metal Finishing Inc.	Metal fabrication, light industrial	8/31/2024
MO-R22A226	MWM Wood Products	Lumber and wood products	9/16/2024
MO-R22A288	Ozark Wood	Lumber and wood products	9/16/2024
MO-R60A301	T and R Recycling	Motor vehicle salvage	5/29/2013
MO-R60A302	T and R Recycling	Motor vehicle salvage	5/29/2013
MO-R60A315	Halls	Motor vehicle salvage	12/11/2023
MO-R60A404	Schwartz Sales LLC	Motor vehicle salvage	12/11/2023
MO-RA11633	Scenic Rivers Plaza	Construction or land disturbance	2/7/2022
MO-RA12584	PCRMC Salem Clinic	Construction or land disturbance	2/7/2022
MO-RA12881	Dent County Jail	Construction or land disturbance	2/7/2022

For this Revised TMDL, the Department assumes the general and non-MS4 stormwater permits described in Tables 8 and 9, as well as any future general or stormwater permitted activities, will be conducted in compliance with all permit conditions, including monitoring and discharge limitations. It is expected that compliance with these permits will be protective of the applicable designated uses within the watershed. For these reasons, general wastewater and stormwater permits are not

expected to cause or contribute to the aquatic life impairment of Spring Creek. At any time, if the Department determines that the water quality of streams in the watershed is not being adequately protected, the Department may require the owner or operator of the permitted site to obtain a site-specific operating permit per 10 CSR 20-6.010(13)(C).

6.1.6 Illicit Straight Pipe Discharges

Illicit straight pipe discharges of domestic wastewater are also potential point sources of nutrients and oxygen consuming substances. These types of sewage discharges bypass treatment systems, such as a septic tank or a sanitary sewer, and instead discharge directly to a stream or an adjacent land area (Brown et al. 2004). Illicit straight pipe discharges are illegal and not authorized under the federal Clean Water Act. At present, there are no data about the presence or number of illicit straight pipe discharges in the Spring Creek watershed. For this reason, it is unknown to what significance straight pipe discharges contribute pollutant loads to Spring Creek. Due to the illegal nature of these discharges, any identified illicit straight pipe discharges must be eliminated.

6.2 Nonpoint Sources

Nonpoint source pollution refers to pollution coming from diffuse, non-permitted sources that typically cannot be identified as entering a water body at a single location and include all other categories of pollution not classified as being from a point source. Nonpoint sources are exempt from Department permit regulations per state rules at 10 CSR 20-6.010(1)(B)1. These sources involve stormwater runoff over land and are typically minor or negligible under low-flow conditions. However, sediment and organic material carried into streams during high precipitation events can accumulate in the receiving streambed. Decomposition of these accumulations can contribute to increased oxygen demand during low-flow conditions when water temperatures are warmer and flowing too slowly for adequate reaeration. Runoff from agricultural areas and non-MS4 permitted urban areas, onsite wastewater treatment systems, and areas with poor riparian corridor conditions are typical sources of nonpoint pollutants that may contribute to water quality impairments.

6.2.1 Agricultural Runoff

Stormwater runoff and soil erosion from lands used for agricultural purposes (hay and pasture, and cropland) are sources of sediment and nutrient loading. Nitrogen and phosphorus may be applied to agricultural lands as chemical fertilizers or from land applications of manure from animal feeding operations (AFOs) that are not regulated by the Department through permits. Application rates and timing vary by site depending upon a number of factors, including manure quality and soil fertility. Manure from grazing livestock may also contribute nutrient loading via stormwater runoff, and animals that are not excluded from streams may deposit manure directly into waterways. Operations using nutrient management plans to guide fertilizer applications and employ best management practices to reduce soil erosion and exclude animals from streams will contribute smaller nutrient and sediment loads than those that do not.

Approximately 90 percent of soils in the Spring Creek watershed have moderate to high runoff potential at some time of the year, and agricultural areas (cropland and pastureland) account for about 46 percent of the watershed. Nutrient runoff from agricultural areas may contribute to low dissolved oxygen concentrations upstream of the Salem Wastewater Treatment Facility.

6.2.2 Unregulated Urban Runoff

Urban stormwater that is not regulated through MS4 permits is considered a nonpoint source. Urban stormwater runoff can contain high levels of nitrogen and phosphorus that may result in nutrient loading to streams, which may contribute to excess algae growth and low dissolved oxygen conditions. During low precipitation and critical low flows, nutrients originating from fertilizer placed on residential lawns, cemeteries, parks, and other vegetated areas may be transported into storm sewers via runoff from sprinkler irrigation. Hobbie et al. (2017) found that pet (dog) waste may contribute 76 percent of total phosphorus inputs and 28 percent of total nitrogen inputs in urban areas. Hobbie et al. (2017) also found that export of phosphorus contributes 32 to 68 percent of storm drain nutrient outputs. Phosphorus transport is especially high in urban areas due to impervious surfaces which inhibit infiltration of soluble phosphorus and the phosphorus-laden runoff is carried to storm drains. In contrast, nitrogen transport is inhibited by up to 83 percent retention in unfertilized parks and storm drain catch basins and pipes. The primary source of urban runoff in the watershed is from the city of Salem. The municipal boundary of Salem covers 3.2 square miles and is completely contained within the Spring Creek Watershed. However, because of data limitations and the wide variability of stormwater discharges, it is not possible to discern or separate the unregulated urban runoff from agricultural runoff.

6.2.3 Onsite Wastewater Treatment Systems

Approximately 25 percent of homes in Missouri utilize onsite wastewater treatment systems, particularly in rural areas where public sewer systems may not be available (DHSS 2018). Onsite wastewater treatment systems treat domestic wastewater and disperse it on the property from where it is generated (i.e., a home septic system). When properly designed and maintained, such systems perform well and should not serve as a source of contamination to surface waters. However, onsite wastewater treatment systems can fail for a variety of reasons. When these systems fail hydraulically (surface breakouts) or hydrogeologically (inadequate soil filtration), there can be adverse effects to surface water quality (Horsley and Witten 1996). Failing onsite wastewater treatment systems can contribute nutrient loads and oxygen consuming substances to nearby streams under wet or dry weather conditions through surface runoff and groundwater flows. Onsite wastewater treatment systems may contribute pollutants to water bodies directly or as a component of stormwater runoff.

The exact number of onsite wastewater treatment (septic) systems in the Spring Creek watershed is unknown. EPA's online input data server for the Spreadsheet Tool for Estimating Pollutant Load (STEPL) provides estimates of septic system numbers and population per system by 12-digit HUC watersheds based on 1992 and 1998 data from the National Environmental Service Center (USEPA 2014).¹³ Estimates of septic system numbers for 12-digit HUC 103001021508 are presented in Table 10. The statewide estimated failure rates were estimated from a study by the Electric Power Research Institute (EPRI 2000). The study suggests that in some areas in Missouri, up to 50 percent of onsite wastewater treatment systems may be failing. Although failing onsite wastewater treatment systems are potential sources of nutrient loading, the significance of such contributions to the impaired segment of Spring Creek is unknown.

¹³ The National Environmental Services Center is located at West Virginia University and maintains a clearinghouse for information related to, among other things, onsite wastewater treatment systems. Available URL: www.nesc.wvu.edu/

Table 10. STEPL Derived Estimates of Septic System Number in the Spring Creek Watershed

Population per System	Number of Systems	Potential Failure Rates
2	2,064	30 – 50%

6.2.4 Riparian Corridor Conditions

Riparian corridor conditions have a strong influence on instream water quality. Wooded riparian buffers are a vital functional component of stream ecosystems and are instrumental in the detention, removal, and assimilation of pollutants in runoff. Therefore, a stream with good riparian cover is often better able to mitigate the impacts of high pollutant loads than a stream with poor or no riparian cover. Shade provided by riparian corridors is also important because it helps to keep water cooler and reduce temperature variation, especially during the critical low flows of July and August.

Table 11 presents land cover calculations for the area within 100 feet of the impaired segment of Spring Creek. Hay and pasture constitutes almost 50 percent of the riparian corridor, while forest constitutes 42 percent. These vegetated portions of the riparian corridor will aid in the detention, removal, and assimilation of nonpoint pollutants. However, areas of hay and pasture may have an increased risk of erosion if grazing livestock are not excluded from the stream, or if adequate buffers to reduce stormwater inputs are not maintained. The presence of shade from forested areas reduces temperature variation throughout the day.

Table 11. Land Cover within 100 feet of the Impaired Segment and Tributaries

Land Cover	Area (acres)	Percent
Barren	0.80	0.03%
Cultivated	5.68	0.20%
Developed	151.62	5.46%
Forest	1169.10	42.09%
Hay and Pasture	1371.19	49.36%
Open Water	27.15	0.98%
Shrub and Herbaceous	25.36	0.91%
Wetlands	26.98	0.97%
Total	2,777.88	100.00%

7. Numeric TMDL Targets and Modeling Approach

The pollutant targets in this revised TMDL have been established such that dissolved oxygen concentrations in Spring Creek will meet the minimum criterion of 5.0 mg/L and the warm water habitat (aquatic life) designated use will be restored. Since dissolved oxygen is not a pollutant and cannot be allocated in a TMDL, other numeric targets that will result in attainment of the water quality standards identified in Section 4 of this document have been selected to address the low dissolved oxygen impairment. These targets include TN, TP, biochemical oxygen demand, and ammonia nitrogen. Applicability and support for the selected targets are provided using a QUAL2K model. An additional total suspended solids (TSS) target is included in this TMDL to address violations of the general criteria associated with excess sedimentation (organic sediment). The load duration curve approach was used to calculate acceptable loading and allocations of TSS. The inclusion of a TSS target addresses organic loading that may occur from point source discharges, as well as additional inorganic sediment and nutrient loading from nonpoint sources.

7.1 Organic Sediment and Nutrients

Sediment transported into streams from point sources and nonpoint sources contains nitrogen and phosphorus (nutrients/organic material) and results in the depletion of dissolved oxygen concentrations as oxygen is used to facilitate the biochemical processes of decomposition. In the presence of organic sediment and nutrients, dissolved oxygen in the stream is consumed faster than it can be replenished through atmospheric oxygen exchange and aquatic organism photosynthesis. This results in low dissolved oxygen until the organic matter has decomposed enough that dissolved oxygen replenishment exceeds dissolved oxygen consumption.

7.2 Total Suspended Solids

Total suspended solids are solids that are suspended (i.e., floating) in stream water or wastewater effluent and include both inorganic and organic sediments. Total suspended solids are comprised of both inorganic solids such as gravel and sand, as well as decomposable organic solids such as sewage particulates. Point sources reduce or remove TSS through filtration of effluent, while nonpoint sources reduce TSS through control of sediment erosion using best management practices. Because phosphorus can adhere to soil carried in runoff, and organic sediment is a component of TSS, reductions in TSS are expected to result in additional nutrient and organic loading reductions that impact overall instream dissolved oxygen concentrations.

7.3 Biochemical Oxygen Demand

Biochemical oxygen demand is representative of both the quantity of oxygen demanding materials in effluent and the concentration of dissolved oxygen in the receiving stream. Biochemical oxygen demand is composed of carbonaceous biochemical oxygen demand (CBOD) (i.e., the amount of oxygen needed for the microbial utilization of carbon compounds) and nitrogenous biochemical oxygen demand (NBOD) (i.e., the amount of oxygen needed for the microbial oxidation of certain nitrogen compounds). Nitrogenous biochemical oxygen demand is estimated directly from Total Kjeldahl Nitrogen (TKN), which is ammonia nitrogen ($\text{NH}_4\text{-N}$) plus organic nitrogen.

7.4 Ammonia as Nitrogen ($\text{NH}_4\text{-N}$)

Ammonia nitrogen can influence water quality in natural systems in two ways. The nitrification process in which ammonia nitrogen is reduced to nitrate (NO_3) consumes an estimated 4.2-4.6 grams of oxygen as O_2 per gram of ammonia as NH_4 (Cox 2003). High ammonia nitrogen concentrations in wastewater effluent exert a high oxygen demand (e.g., NBOD) that can contribute to low dissolved oxygen in receiving streams. In addition to depleting oxygen, ammonia can be toxic to aquatic life and must not exceed the concentrations found in Tables B1 and B2 of Missouri's Water Quality Standards. Water quality targets for ammonia nitrogen must be protective of both possible pathways.

7.5 QUAL2K Modeling

QUAL2K is a steady state model based on the Streeter-Phelps equation that estimates the effects of point source biochemical oxygen demand from sewage effluent on receiving stream dissolved oxygen concentrations. QUAL2K simulates the link between dissolved oxygen and biochemical oxygen demand. The QUAL2K model calculates biochemical oxygen demand by using CBOD, organic nitrogen, and ammonia nitrogen data from the wastewater treatment facility's discharge monitoring report and produces estimates of in-stream dissolved oxygen concentrations.

Three QUAL2K models, a calibration model and two critical condition models, were developed to determine allowable pollutant loading in Spring Creek. For the calibration model, observed data are used to adjust the model to simulate stream characteristics. The calibration model inputs were based on flow data recorded at five sample points along Spring Creek on August 27, 2003. Data recorded on this date represent the most recent water quality data from the impaired segment when both morning low and afternoon high dissolved oxygen concentrations were recorded on the same day.¹⁴ These data are summarized in Table 6 and Appendix A.

The critical condition model uses the calibrated stream characteristics to simulate a low-flow critical condition when the Salem Wastewater Treatment Facility is expected to be the predominant source of flow in Spring Creek, and in-stream conditions are most likely to result in low dissolved oxygen conditions. The 2021 QUAL2K critical condition model demonstrates that when wasteload allocations are applied to the Salem Wastewater Treatment Facility, Missouri Water Quality Standards are attained in the impaired segment and existing compliance downstream is maintained. Wasteload allocations result in attainment of the minimum dissolved oxygen criterion under low-flow critical conditions, and are therefore expected to result in attainment of the minimum dissolved oxygen criterion under other flow conditions when additional reaeration through turbulence and increased pollutant dilution are more likely. Model assumptions, tables of model inputs, and graphical model outputs are provided in Appendix A.

7.6 Total Suspended Solids Load Duration Curve

The load duration curve approach was used to calculate the allowable loading of TSS into Spring Creek. The load duration approach provides a visual representation of stream flow conditions and the pollutant loading that will attain surface water quality targets during those flow conditions. When observed data from the impaired water body is available, the load duration curve approach is also useful in identifying and differentiating between storm-driven and steady-input sources, which can then inform appropriate restoration actions. To develop the TSS load duration curve for Spring Creek, a flow duration curve was developed using a synthetic flow derived from the average daily flow data collected from multiple USGS stream gages in the EDU where Spring Creek is located. For this TMDL, the targeted pollutant loading for TSS is based on the 25th percentile concentration of all USGS TSS data available from Missouri in the EDU for which Spring Creek is located. The concentration target calculated using this approach is 5 mg/L. Additional discussion about the methods used in the modeling and development of the TSS load duration curve for Spring Creek is presented in Appendix B.

8. Calculating Loading Capacity

A TMDL calculates the loading capacity of a water body and allocates that load among the various pollutant sources in the watershed. The loading capacity is the maximum pollutant load that a water body can assimilate and still meet water quality standards. The TMDL is equal to the sum of the wasteload allocations, load allocations, and the margin of safety:

$$\text{TMDL} = \text{LC} = \Sigma \text{WLA} + \Sigma \text{LA} + \text{MOS}$$

¹⁴ Water quality data collected in Spring Creek in 2008 were not sampled adequately early to capture critical low dissolved oxygen conditions.

where LC is the loading capacity, ΣWLA is the sum of the wasteload allocations, ΣLA is the sum of the load allocations, and MOS is the margin of safety.

The following formula is used to convert pollutant concentrations to pounds/day:

(flow in ft³/sec)(maximum allowable pollutant concentration in mg/L)(5.395*)= pounds/day

*5.395 is the conversion factor used to obtain units of pounds/day.

For this TMDL, the pollutant loading capacity for biochemical oxygen demand, nutrients, and ammonia as nitrogen were calculated at critical low-flow conditions when in-stream conditions are most likely to result in violations of Missouri's dissolved oxygen criterion due to increased temperature, and limited dilution and flow. The loading capacity of these pollutants is equal to the sum of the nonpoint source load allocation and the sum of wasteload allocations to the Salem Wastewater Treatment Facility. An implicit margin of safety was used for all TMDL calculations as described in Section 11. The pollutant loading capacity and allocations for the impaired segment of Spring Creek during critical low-flow conditions are presented in Table 12. The loading capacity for TSS was calculated using a load duration curve (Figure 9), and allocations at various flows are presented in Table 13. Additional discussion regarding specific allocations of pollutant loading capacities and margin of safety is provided in Sections 9, 10, and 11.

Table 12. Critical Low Flow TMDL for Spring Creek

Pollutant	Loading Capacity (lbs/day)	ΣWasteload Allocation (lbs/day)	ΣLoad Allocation (lbs/day)
BOD ₅	19.77	18.87	0.904
TP	3.11	3.09	0.012
TN	79.07	78.55	0.515
NH ₃ -N	3.74	3.71	0.027

Table 13. Typical Low Flow (90 Percent Flow Exceedance) TMDL for Spring Creek

Pollutant	Loading Capacity (lbs/day)	ΣWasteload Allocation (lbs/day)	ΣLoad Allocation (lbs/day)
BOD ₅	28.31	18.87	9.45
TP	3.22	3.09	0.13
TN	83.93	78.55	5.38
NH ₃ -N	3.99	3.71	0.28

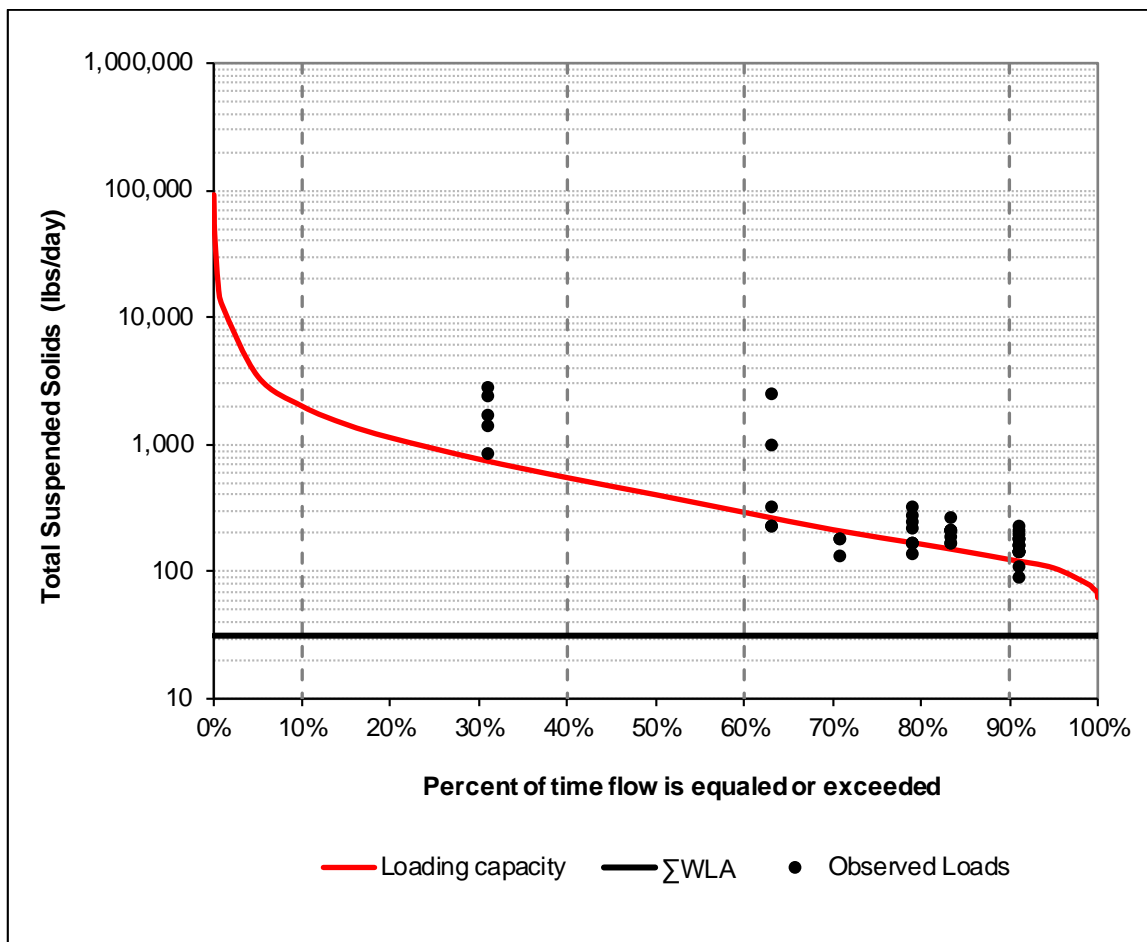


Figure 9. Total Suspended Solids Load Duration Curve

Table 14. Total Suspended Solids TMDL and Allocations at Various Flows

Percent of time flow equaled or exceeded	Flow (cfs)	Loading Capacity (lbs/day)	ΣWasteload Allocation (lbs/day)	ΣLoad Allocation (lbs/day)
95	4.0	106.89	30.98	75.53
75	6.9	186.52	30.98	155.17
50	14.9	402.68	30.98	371.33
25	33.9	914.31	30.98	882.96
5	126.6	3,415.47	30.98	3,384.12

9. Wasteload Allocation (Allowable Point Source Load)

The wasteload allocation is the allowable amount of the loading capacity assigned to existing or future point sources. This section discusses the rationale and approach for assigning wasteload allocations to point sources in the Spring Creek watershed as well as considerations given for future sources. Typically, point source permit limits for a given pollutant are the most stringent of either technology-based effluent limits or water quality-based effluent limits. Technology-based effluent limits are based upon the expected capability of a treatment method to reduce the pollutant to a certain concentration. Water quality-based effluent limits represent the most stringent concentration of a pollutant that a receiving stream can assimilate without violating applicable water quality standards at a specific location. Final effluent limits or other permit conditions must be consistent with the assumptions and requirements of TMDL wasteload allocations per 40 CFR

122.44(d)(1)(vii)(B). Mixing zones and zones of initial dilution are not allowed in regulation for streams with 7Q10 low flows of less than 0.1 cubic feet per second (cfs) [10 CSR 20-7.031(5)(A)4.B.(I)]. Spring Creek is classified as a Class P stream with an estimated 7Q10 low flow of 1.32 cfs.¹⁵ For this reason a regulatory mixing zone was considered in the modeling. For the critical condition low-flow model, one fourth the 7Q10 was used as flow available for mixing in the model. The modeled point of minimum dissolved oxygen downstream of the Salem Wastewater Treatment Facility occurs outside the bounds of the area that would be allowed in regulation for mixing (i.e., one-quarter mile). At no time did the predicted in-stream dissolved oxygen concentration go below the minimum criterion of 5.0 mg/L. Therefore, no additional dilution was applied in the modeling as a result of the mixing zone. In order to ensure attainment of applicable water quality standards in Spring Creek, all water quality targets must be met at end of pipe. The wasteload allocations in this TMDL report do not authorize any facility to discharge pollutants at concentrations that exceed water quality standards.

9.1 Municipal and Domestic Wastewater Discharges

As discussed in Section 6.1.1, the Salem Wastewater Treatment Facility accounts for approximately 90 percent of the flow in Spring Creek during critical low flows, and is the predominant source of pollutants during all flow regimes. The other wastewater treatment facilities in the Spring Creek watershed are unlikely to discharge during the critical low flow periods and discharge an insignificant volume of effluent when compared to the Salem Wastewater Treatment Facility. The wasteload allocations for the Salem Wastewater Treatment Facility are based on the facility's design flow and appropriate pollutant concentration targets shown by QUAL2K to attain the minimum dissolved oxygen water quality criterion of 5.0 mg/L for the protection of warm water habitat, as well as an additional TSS reference target derived to attain compliance with general criteria associated with organic sediment loading. Wasteload allocations for the Salem Wastewater Treatment Facility are applicable at all flows. In addition to authorized discharges from municipal wastewater treatment facilities, areas serviced by sanitary sewer systems risk nutrient contributions from accidental overflows. As mentioned in Section 6.1.1 of this document, sanitary sewer overflows are unpermitted discharges and not authorized under the federal Clean Water Act. For this reason, sanitary sewer overflows are assigned a wasteload allocation of zero.

Table 15. Wasteload Allocations for Domestic Wastewater Dischargers

Effluent Parameter	Design Flow (MGD)	Existing Permit Limit ¹⁶		WLA at Design Flow		Percent Reduction
		Concentration (mg/L)	Load (lbs/day)	Concentration (mg/L)	Load (lbs/day)	
Salem WWTF (MO-0021768)						
BOD ₅	0.741	Monthly Average = 20	124	3.05	18.87	84.75%
TP	0.741	No Existing Limit	No data	0.5	3.09	No data
TN	0.741	No Existing Limit	No data	12.7	78.55	No data

¹⁵ StreamStats: Streamflow Statistics and Spatial Analysis Tools for Water-Resources Applications <https://streamstats.usgs.gov/ss/>

¹⁶ The current active permit for the Salem Wastewater Treatment Facility (issued March 1, 2014 modified June 24, 2014, and expired on December 31, 2017) includes final effluent limits, which became effective on July 1, 2018.

Effluent Parameter	Design Flow (MGD)	Existing Permit Limit ¹⁶		WLA at Design Flow		Percent Reduction
		Concentration (mg/L)	Load (lbs/day)	Concentration (mg/L)	Load (lbs/day)	
NH ₃ -N	0.741	Monthly Average = 1.5	9.28	0.6	3.71	60%
TSS	0.741	Monthly Average = 30	186	5.0	37.17	83%
DO*	0.741	No Existing Limit	n/a	7.5	n/a	n/a
Adams Subdivision WWTF						
Effluent Parameter	Design Flow (MGD)	Existing Permit Limit		WLA at Design Flow		Percent Reduction
		Concentration (mg/L)	Load (lbs/day)	Concentration (mg/L)	Load (lbs/day)	
Same as above	0.009	n/a		Existing permit limits and conditions		n/a
Sanitary Sewer Overflows						
Illegal dsischarge				0		100%

* Note: for water quality standards to be attained at specified wasteload allocations, Salem WWTF effluent should be maintained to no less than 7.5 mg/L dissolved oxygen.

For point source reductions to achieve the specified loading targets, additional upgrades to the Salem Wastewater Treatment Facility, such as biological or enhanced nutrient removal, may be necessary.

9.2 Site-Specific Permitted Industrial and Non-Domestic Wastewater Facilities

There are no site-specific permitted industrial and non-domestic wastewater facilities in the Spring Creek watershed. Therefore, such sources are not assigned a portion of the calculated loading capacity.

9.3 CAFOs

There are no CAFOs in the Spring Creek watershed, thus CAFOs are not assigned a portion of the calculated loading capacity.

9.4 MS4 Permits

There are no MS4 permitted entities in the Spring Creek watershed. Therefore, such sources are not assigned a portion of the calculated loading capacity.

9.5 General Wastewater and Non-MS4 Stormwater Permits

Activities permitted through general or stormwater permits are not expected to contribute significant pollutant loads to surface waters. It is expected that compliance with these types of permits will be protective of the warm water habitat use designated to Spring Creek. For this reason, these types of facilities are not assigned a specified portion of the calculated loading capacity and wasteload allocations are set at existing permit limits and conditions, which are assumed to result in pollutant loading at *de minimis* concentrations that will not exceed the total wasteload allocation.

9.6 Illicit Straight Pipe Discharges

Illicit straight pipe discharges are illegal and are not permitted under the federal Clean Water Act. For this reason, illicit straight pipe discharges are assigned a wasteload allocation of zero. Any existing sources of this type must be eliminated.

9.7 Considerations for Future Point Sources

For this TMDL, no specific portion of the loading capacity is allocated to a reserve capacity. However, the wasteload allocations presented in this TMDL report do not preclude the establishment of future point sources in the watershed. Any future point sources should be evaluated against the TMDL, the range of flows with which any additional loading will affect, and any additional requirements associated with antidegradation. Per federal regulations at 40 CFR 122.4(a), no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the federal Clean Water Act, or regulations promulgated under the federal Clean Water Act. Additionally, 40 CFR 122.4(i) states no permit may be issued to a new source or new discharger if the discharge from its construction or operation will cause or contribute to violation of water quality standards. Facility types not currently existing in the watershed and not allocated a portion of the loading capacity may be permitted as no discharge facilities as long as permit conditions for land application or other controls maintain potential loading at *de minimis* concentrations. Future general (MO-G) and stormwater (MO-R) permitted activities that operate in full compliance with permit conditions are not expected to contribute pollutant loads above *de minimis* levels and will not result in loading that exceeds the sum of the TMDL wasteload allocations. Decommissioning of onsite wastewater treatment systems and home connection to a sewerage system for wastewater treatment will result in net pollutant reductions that are consistent with the goals of this TMDL. Wasteload allocations calculated for the Salem Wastewater Treatment Facility are based on design flow instead of actual flow and will account for future discharge increases. Wasteload allocations between point sources may also be appropriately shifted between individual point sources where pollutant loading has shifted as long as the sum of the wasteload allocations is unchanged. In some instances a potential source may be re-categorized from a nonpoint source to a point source (e.g., newly designated MS4s or other permitted stormwater). If such a source's magnitude, character, and location remain unchanged, then the appropriate portion of the load allocation may be assigned as a wasteload allocation.

10. Load Allocation (Nonpoint Source Load)

The load allocation is the amount of the pollutant load that is assigned to existing and future nonpoint sources, as well as natural background contributions (40 CFR 130.2(g)). Best management practices (BMPs) that reduce erosion and nutrient transport are recommended to reduce pollutant loading from agricultural and urban areas.

The low flow nonpoint source load allocations for nitrogen and phosphorus in Tables 12 and 13 (Section 8) were derived using the observed low flow on August 27, 2003, the flow corresponding to the 90 percent flow exceedance from the synthetic flow duration curve, and the recommended EPA Level III Ecoregion 40 criteria for natural streams. The load allocations in pounds per year are the EPA Level III Ecoregion nitrogen and phosphorus concentrations multiplied by the area corrected flows in cfs and a conversion factor of 5.395. Although loading capacity and load allocations are presented only for low flow conditions when the dissolved oxygen impairment is likely to occur, it is expected that nonpoint source pollutant reductions in the watershed will target EPA Level III Ecoregion concentration targets during all flow conditions. The five day carbonaceous biochemical oxygen demand (CBOD₅) and five day biochemical oxygen demand (BOD₅) wasteload allocations are based on the CBOD concentration entered into the QUAL2K model used to determine the wasteload allocations for the Salem Wastewater Treatment Facility using the same flows and conversion factor.

Load allocations for TSS are the remainder of the TSS loading capacity after allocations to the Salem Wastewater Treatment Facility (Figure 9 and Table 14).

11. Margin of Safety

A margin of safety is required in the TMDL calculation to account for uncertainties in scientific and technical understanding of water quality in natural systems (CWA Section 303(d)(1)(C) and 40 CFR 130.7(c)(1)). The margin of safety is intended to account for such uncertainties in a conservative manner. Based on EPA guidance, the margin of safety can be achieved through two approaches:

- Explicit - Reserve a portion of the loading capacity as a separate term in the TMDL.
- Implicit - Incorporate the margin of safety as part of the critical conditions for the wasteload allocation and the load allocation calculations by making conservative assumptions in the analysis.

For this TMDL an implicit margin of safety was used. The margin of safety was incorporated into the development of this TMDL by making conservative assumptions in the analysis as follows:

- The load allocations for the Spring Creek Headwater are based on EPA Level III Ecoregion 39 criteria for natural streams.
- Total suspended solids targets are based on the 25th percentile concentration of all USGS TSS data available from Missouri in the EDU in which Spring Creek is located. Additionally, because phosphorus can adhere to soil carried in runoff and organic sediment is a component of TSS, reductions in TSS are expected to result in additional nutrient and organic loading reductions that impact overall instream dissolved oxygen concentrations.

12. Seasonal Variation

Federal regulations at 40 CFR 130.7(c)(1) require that TMDLs take into consideration seasonal variation in applicable standards. This TMDL considered seasonal variation by assuming that the Salem Wastewater Treatment Facility accounts for the majority of the flow in Spring Creek during critical low-flow conditions. Critical low-flow conditions represent the highest stream temperatures and lowest flows, when assimilation of pollutants and reaeration of dissolved oxygen are the most difficult. It is expected that achievement of these wasteload and load allocations during other conditions not associated with summer low-flow critical conditions will also result in attainment of water quality standards. However, conservative assumptions and implicit margins of safety incorporated into the TMDL may allow for effluent quality at other times of the year (e.g., winter) that may also result in achievement of Missouri's minimum dissolved oxygen criterion. Such considerations for alternative effluent limitations during winter months when critical conditions are not as likely to occur must take into account available data associated with the parameters of concern, achievement of water quality standards in Spring Creek, and must be consistent with the underlying model and assumptions of the TMDL. Missouri Water Quality Standards account for seasonal variation by establishing ammonia as nitrogen criteria based on pH and temperature such that the criteria are more stringent when water temperatures are higher. For TSS, the load duration curve developed for this TMDL represents streamflow under all conditions as it was developed using numerous years of flow data collected during all seasons. For this reason, the TSS targets and allocations found in this TMDL report will be protective of applicable general criteria during all seasons and under all flow conditions, including critical conditions associated with pollutant loading.

13. Monitoring Plans

The Department often schedules and carries out post-TMDL monitoring within a reasonable timeframe following completion of permit compliance schedules, facility upgrades, or the implementation of watershed BMPs. The Department will make efforts to conduct field water quality studies that will yield data that represent the normal low flow condition of Spring Creek. Data collected during such monitoring will be used to determine either attainment or continued impairment of water quality standards as part of the biennial water quality assessments required for federal Clean Water Act 305(b) and 303(d) reporting. The data derived from this monitoring may also be used for adjusting pollutant reduction goals and informing implementation activities. Furthermore, the Department will also routinely examine any available quality-assured water quality data collected from Spring Creek by other local, state and federal entities in order to assess the effectiveness of TMDL implementation. In addition, certain quality-assured data collected by universities, municipalities, private companies, and volunteer groups may potentially be considered for monitoring water quality following TMDL implementation.

14. Reasonable Assurance

Section 303(d)(1)(C) of the federal Clean Water Act requires that TMDLs be established at a level necessary to implement applicable water quality standards. As part of the TMDL process, consideration must be given to the assurances that point and nonpoint source allocations will be achieved and water quality standards attained. Where TMDLs are developed for waters impaired by point sources only, reasonable assurance is provided through the National Pollutant Discharge Elimination System permitting program. State operating permits requiring effluent and instream monitoring be reported to the Department should provide reasonable assurance that instream water quality standards will be met. The Department regulates point source discharges from the Salem Wastewater Treatment Facility through Missouri State Operating Permit MO-0021768.

Where a TMDL is developed for waters impaired by both point and nonpoint sources, point source wasteload allocations must be stringent enough so that in conjunction with the water body's other loadings (i.e., nonpoint sources) water quality standards are met. Reasonable assurance that nonpoint sources will meet their allocated amount is dependent upon the availability and implementation of nonpoint source pollutant reduction plans, controls, or BMPs within the watershed. If BMPs or other nonpoint source pollution controls allow for more stringent load allocations, then wasteload allocations can be less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs (40 CFR 130.2(i)). When a demonstration of nonpoint source reasonable assurance is developed for an impaired water body, additional pollutant allocations for point sources may be allowed provided water quality standards are still attained. If a demonstration of nonpoint source reasonable assurance does not exist, or it is determined that nonpoint source pollutant reduction plans, controls, or BMPs are not feasible, durable, or will not result in the required load reductions, then allocation of greater pollutant loading to point sources cannot occur. This TMDL assumes discharge from the Salem Wastewater Treatment Facility is the primary source of flow in Spring Creek during critical low-flow conditions. Therefore, this TMDL does not include wasteload allocations that are less stringent than the water quality targets determined to attain water quality standards.

A variety of grants and loans may be available to assist watershed stakeholders with developing and implementing watershed based plans, controls, and practices to meet the required wasteload and load allocations in the TMDL and demonstrate reasonable assurance. Additionally, cost-share

opportunities for implementation of agricultural BMPs are also available. Examples of nonpoint source reduction practices implemented in the Spring Creek watershed between 2014 and 2020 are presented in Table 15. These practices reduce both sediment and nutrient transport into streams by reducing overland runoff and erosion.

Additional information regarding potential funding sources, cost-share opportunities, and implementation actions addressing pollutant sources in the Spring Creek watershed is provided in the supplemental TMDL Implementation Strategies document available online at dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/tmdls.

Table 16. Nonpoint Source Reduction Practices Implemented in the Spring Creek HUC-12

Year	Practice	Sediment and Nutrient Reduction Area (Acres)
2014	Permanent Vegetative Cover Establishment	139.4
2015	Permanent Vegetative Cover Establishment	109.8
	Grazing System Water Distribution	387.1
	Grazing System Fence	379.7
	Grazing System Lime	30.0
	Livestock Exclusion	28.7
2016	Permanent Vegetative Cover Establishment	76.0
	Permanent Vegetative Cover Improvement	48.0
	Grazing System Water Development	253.8
	Grazing System Water Distribution	519.9
	Grazing System Fence	458.4
	Grazing System Lime	198.1
	Permanent Vegetative Cover Enhancement	9.7
	Livestock Exclusion	21.6
	Stream Protection	1.0
2017	Permanent Vegetative Cover Establishment	19.8
	Grazing System Lime	46.4
	Permanent Vegetative Cover Enhancement	47.5
	Beef Waste Management System	0.0
2018	Permanent Vegetative Cover Establishment	80.0
	Grazing System Water Distribution	101.4
	Grazing System Fence	110.3
	Livestock Exclusion	27.0
	Stream Protection	23.5
2019	Permanent Vegetative Cover Establishment	22.4
	Grazing System Water Development	32.0
	Grazing System Water Distribution	93.3

	Grazing System Fence	40.6
	Grazing System Lime	244.7
	Livestock Exclusion	12.0
	Stream Protection	16.0
2020	Permanent Vegetative Cover Enhancement	34.3
	Total	3,612.4

15. Public Participation

EPA regulations at 40 CFR 130.7 require that TMDLs be subject to public review. An initial 45-day public notice period was held for this revised TMDL from June 5 through July 20, 2020. All comments received during this public comment period were considered in finalization of the TMDL. The TMDL was subsequently submitted to EPA Region 7 on September 16, 2020. Following modeling adjustments in response to post-submittal comments provided by EPA, the Department scheduled a second public notice period for this TMDL from October 22 to December 6, 2021. The Department will make all comments received during these public notice periods and the Department's responses to those comments available online. Groups that directly received notice of the public comment period for this TMDL include, but are not limited to:

- Missouri Clean Water Commission;
- Missouri Water Protection Forum;
- Missouri Department of Conservation;
- County soil and water conservation district;
- Dent County commission;
- Meramec Regional Planning Commission;
- University of Missouri Extension;
- Missouri Coalition for the Environment;
- Stream Teams United;
- Stream Team volunteers living in or near the watershed;
- Affected permitted entities; and
- Missouri state legislators representing areas within the watershed.

In addition to those groups contacted directly about the public notice, the Department posted this TMDL revision and an implementation strategies document online at dnr.mo.gov/env/wpp/tmdl/1870-spring-ck-record.htm.

The Department also maintains an email distribution list for notifying subscribers of significant TMDL updates or activities, including public notices and comment periods. Those interested in subscribing to TMDL updates can submit their email address using the online form available at public.govdelivery.com/accounts/MODNR/subscriber/new?topic_id=MODNR_177.

16. Administrative Record and Supporting Documentation

The Department has an administrative record on file for the revised Spring Creek TMDL. The record contains plans, studies, and other information on which the TMDL is based. It additionally includes the public notice announcement, any public comments received, the Department's responses to those comments, and files associated with the development of this revised TMDL and the original 2010 TMDL. This information is available upon request to the Department.

atdnr.mo.gov/open-records-sunshine-law-requests. The Department will process any request for information about this TMDL in accordance with Missouri's Sunshine Law (Chapter 610, RSMo) and the Department's administrative policies and procedures governing Sunshine Law requests.

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Appendix A

Support for QUAL2K Model Assumptions

2010 Approved TMDL QUAL2K Model

A review of the QUAL2K model used for development of the 2010 TMDL revealed various issues resulting in the need for revision. The 2010 QUAL2K model inputs included five reaches designated by six water quality sample points. Reach 1 spanned from 2.5 miles above the Salem Wastewater Treatment Facility to the confluence of a small tributary 1.3 miles above the Wastewater Treatment Facility. Reach 2 spanned from the end of Reach 1 to a point 0.02 miles upstream of the Salem Wastewater Treatment Facility. QUAL2K estimates the effects of point source sewage effluent on receiving stream dissolved oxygen, nitrogen, and phosphorus concentrations using numeric inputs for the headwater, point sources (which may also include incoming tributaries), and diffuse sources (which includes groundwater flow). Water quality data immediately above the major point source in question are typically input for the headwater. The presence of two long reaches of Spring Creek upstream of the Salem Wastewater Treatment Facility means that the headwater inputs reflect water quality a great distance upstream of the facility. This is likely to cause QUAL2K to inaccurately predict the effects of the point source sewage effluent on the impaired segment of Spring Creek, because the model would not estimate the change in water quality as it is occurring immediately upstream and downstream of the facility. Such predictions are the primary purpose of using a QUAL2K model.

Further examination of the original 2010 QUAL2K model revealed that the data used do not reflect a critical low dissolved oxygen condition. Samples were not collected early enough in the day to capture the lowest dissolved oxygen values, and none of the dissolved oxygen values presented in Table C.2 of the 2010 TMDL are less than 5.0 mg/L. In addition, data used for calibration were collected in May when stream temperature, air temperature, and groundwater contributions are not expected to be representative of critical conditions.

2021 Revised QUAL2K Calibration Model

The revised QUAL2K model was calibrated to Department data recorded on August 27, 2003. The 2003 records are the most recent data available where early morning low dissolved oxygen concentrations were recorded in addition to afternoon data. These data are presented in Table A-1.

Table A-1. Data Used for the 2021 Revised QUAL2K Calibration Model

Date	Sample Site	Location	Time	Flow (cfs)	TKN (mg/L)	Nitrate (mg/L)	DO (mg/L)	pH	Temp (°C)	TP (mg/L)
8/27/2003	M1	0.1 mi ab. Salem	6:10	0.05	0.33	0.290	5.4	7.75	24	0.060
8/27/2003	M1	0.1 mi ab. Salem	13:00	-	0.32	0.230	18.8	8.7	27	0.070
8/27/2003	M2 (outfall)	Salem WWTP	6:00	-	-	-	3.0	7.6	24	-
8/27/2003	M2 (outfall)	Salem WWTP	12:50	-	1.33	16.600	5.7	7.7	30	4.900
8/27/2003	M3	1.0 mi bl. Salem	6:30	2.54	0.51	7.130	5.1	7.7	21	4.380
8/27/2003	M3	1.0 mi bl. Salem	13:15	-	0.3	6.940	6.6	8.01	22	1.190

8/27/2003	M4	4.2 mi bl. Salem	6:50	2.66	0.53	3.760	4.8	7.71	24	0.450
8/27/2003	M4	4.2 mi bl. Salem	13:00	-	0.65	3.520	6.4	7.43	24	0.440
8/27/2003	M5	5.0 mi bl. Salem	6:25 AM	4.02	0.25	3.130	5.0	7.8	23	0.380
8/27/2003	M5	5.0 mi bl. Salem	13:30	-	0.57	3.060	6.6	7.06	24	0.350

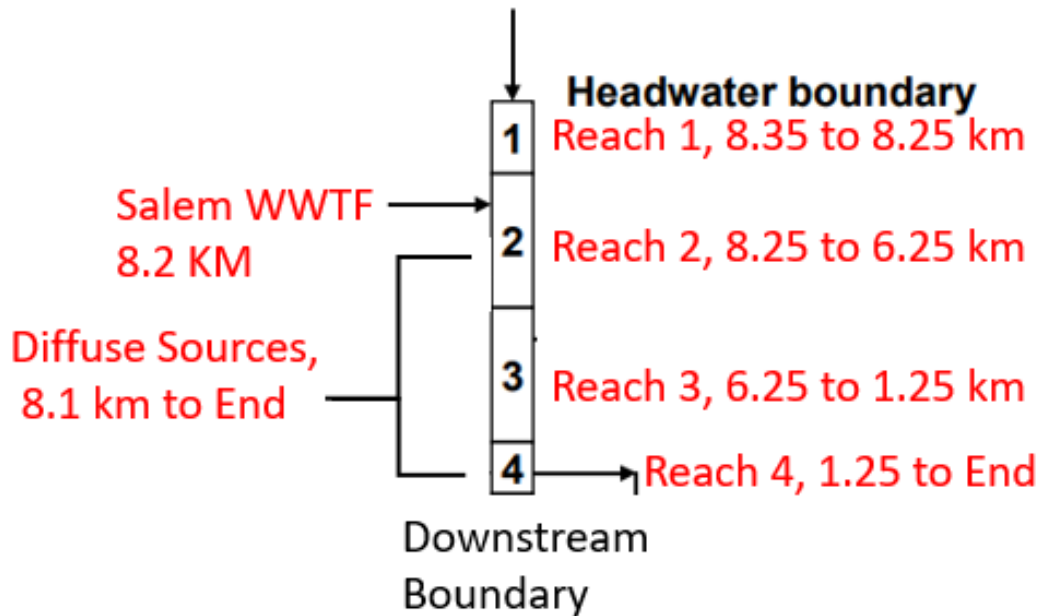


Figure A-1. Spring Creek QUAL2K Reaches

The impaired section of Spring Creek was divided into four reaches in the revised 2021 QUAL2K model (Figure A-1). QUAL2K headwater input values and data sources are presented in Table A-2. Point Source inputs for the Salem Wastewater Treatment Facility are presented in Tables A-3 and A-4. The inputs used provide the most conservative assumptions, and align the best fit of the QUAL2K model within the range of literature values and to the observed data when available. The resulting calibration graphs for dissolved oxygen, nitrogen, and phosphorus are presented in Figures A-2 through A-5.

Table A-2. QUAL2K Calibration Model Headwater Inputs

Field	Value	Source
Flow Rate	0.00142 cubic meters per sec.	M1 8/27/2003 6:10 am
Inorganic solids*	6.0 mg/L 3.0 mg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Temperature	21.88 °C 22.47 °C	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Conductivity	461.0 umhos 839.0 umhos	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Dissolved Oxygen	5.4 mg/L 18.8 mg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Fast CBOD ultimate	5.52 mg/L	M1 8/27/2003 6:10 am

Organic Nitrogen**	315.0 µg/L 290.0 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
NH ₄ -N (Ammonia Nitrogen)	15.0 µg/L 15.0 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Nitrate	290 µg/L 230 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Organic Phosphorus	55.8 µg/L 65.1 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Inorganic Phosphorus	0.0042 µg/L 0.0049 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Phytoplankton (Chlorophyll-a)	5.0 µg/L 4.2 µg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Detritus (Volatile Suspended Solids)	6.0 mg/L 5.0 mg/L	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm
Alkalinity	151.0 mgCaCO ₃ /L	Median of Current River Means (USGS 1978) ¹⁷
pH	7.85 8.70	M1 8/27/2003 6:10 am M1 8/27/2003 1:00 pm

*Inorganic solids was calculated by subtracting volatile suspended solids from non-filterable residue.

**Organic nitrogen was calculated by subtracting ammonia nitrogen from total kjeldhal nitrogen.

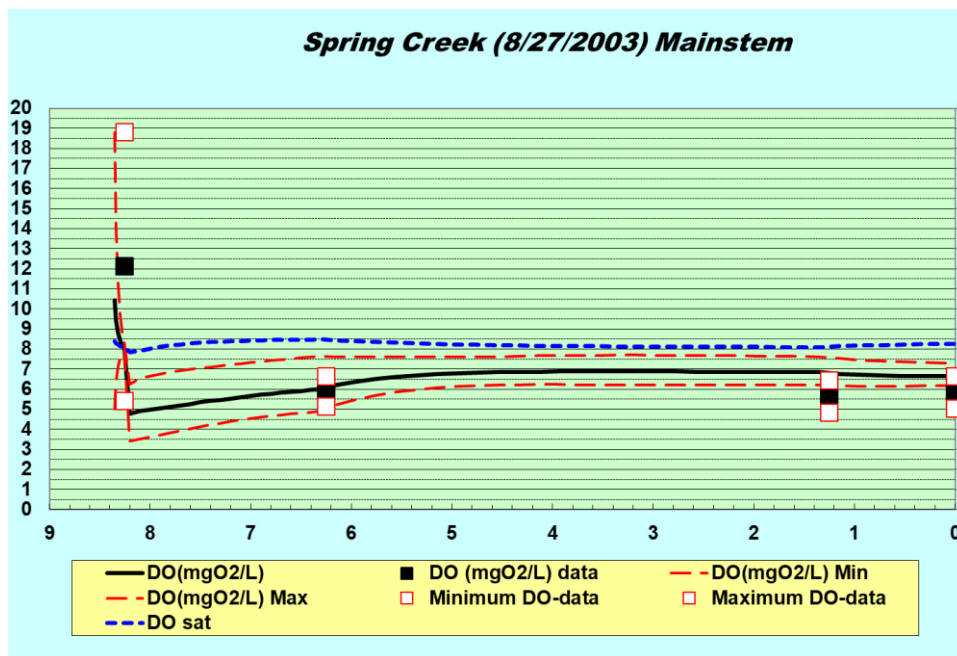
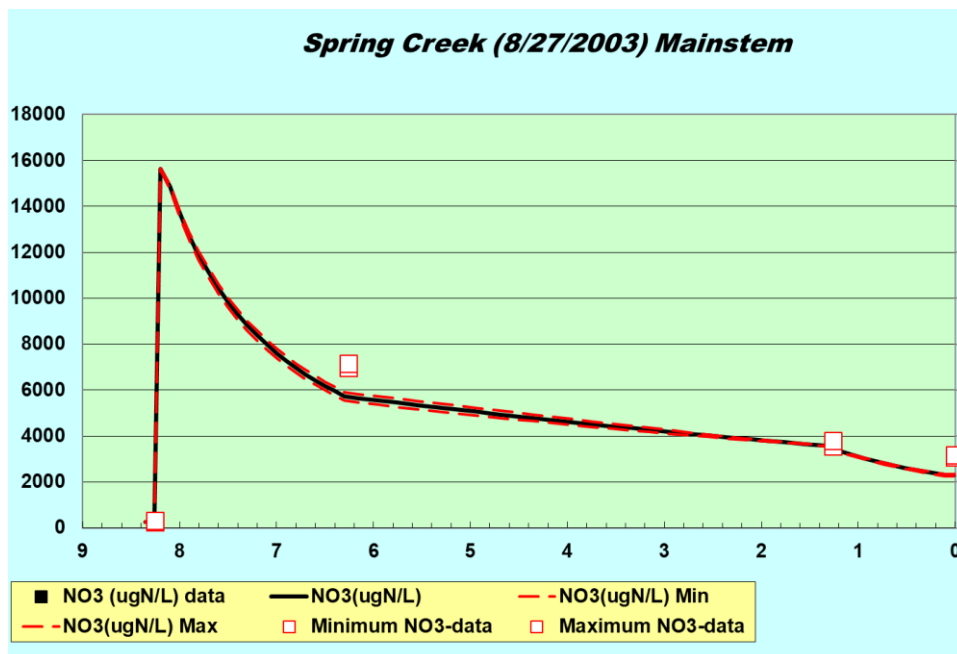
Table A-3. QUAL2K Calibration Model Salem WWTF Inputs

Field	Value	Source
Flow Rate	0.029 cubic meters per sec.	Monthly mean from Salem DMR Reported 8/31/2003 (0.67 MGD)
Temperature	27.0 °C	M2 8/27/2003 mean of values from 6:00 am and 12:50 pm
Conductivity	822.5 umhos	M2 8/27/2003 mean of values from 6:00 am and 12:50 pm
Dissolved Oxygen	4.35 mg/L (+/- 1.35 mg/L)	M2 8/27/2003 mean of values from 6:00 am and 12:50 pm
Fast CBOD ultimate	5.74 mg/L	M2 8/27/2003 12:50
Ammonia nitrogen	80 µg/L	M2 8/27/2003 12:50
Nitrate+Nitrite	16,600 µg/L	M2 8/27/2003 12:50
Organic Phosphorus	4,557 µg/L (93%)	M2 8/27/2003 12:50 TP = 4,900 µg/L
Inorganic Phosphorus	343 µg/L (7%)	
Phytoplankton	3.1 (+/- 1) µg/L	M3 8/2/2003 mean of Chl-a values from 6:30 am and 1:15 pm
Alkalinity	100.0 mgCaCO ₃ /L	Model default value
Detritus	7.0 mg/L	M2 8/27/2003 12:50 Volatile Suspended solids
pH	7.65	M2 8/27/2003 mean of values from 6:00 am and 12:50 pm

¹⁷ Barks, James H. 1978. Water Quality in the Ozark National Scenic Riverways, Missouri. Geological Survey Water-Supply Paper 2048. Prepared in cooperation with the National Park Service, U.S. Department of Interior.
<https://pubs.usgs.gov/wsp/2048/report.pdf>

Table A-4. QUAL2K Calibration Model Diffuse Source Inputs

	Flow (cms)	Temp. (°C)	CBOD (mg/L)	DO (mg/L)	Organic N (ug/L)	NH ₄ -N (ug/L)	Nitrate (ug/L)	Total P (ug/L)
Reach 2	0.0429	15.00	4.00	2.30	25.00	5.00	260.00	0.00
Reach 3	0.0034	18.00	7.00	2.00	100.00	30.00	300.00	0.00
Reach 4	0.0384	20.00	7.00	2.00	100.00	30.00	300.00	0.00

**Figure A-2. QUAL2K Calibration Model – Dissolved Oxygen****Figure A-3. QUAL2K Calibration Model – Nitrates (NO₂ + NO₃)**

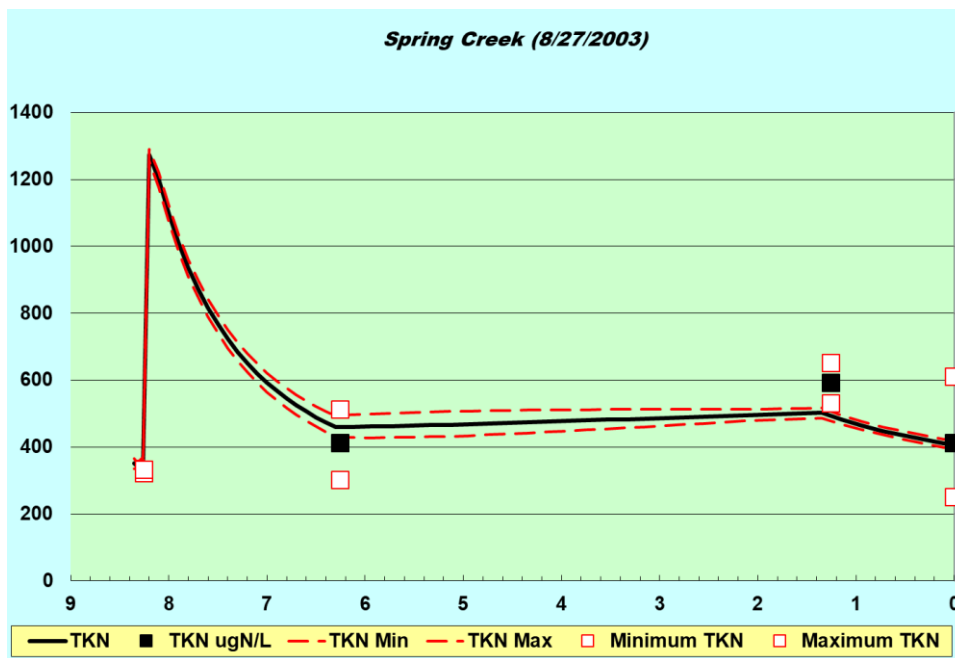


Figure A-4. QUAL2K Calibration Model – Total Kjeldahl Nitrogen

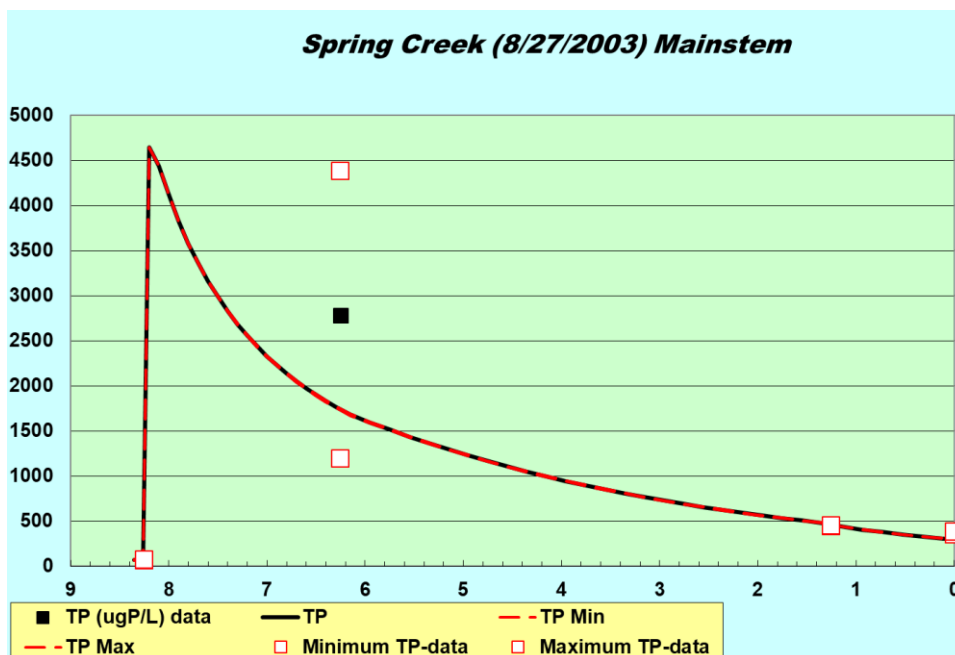


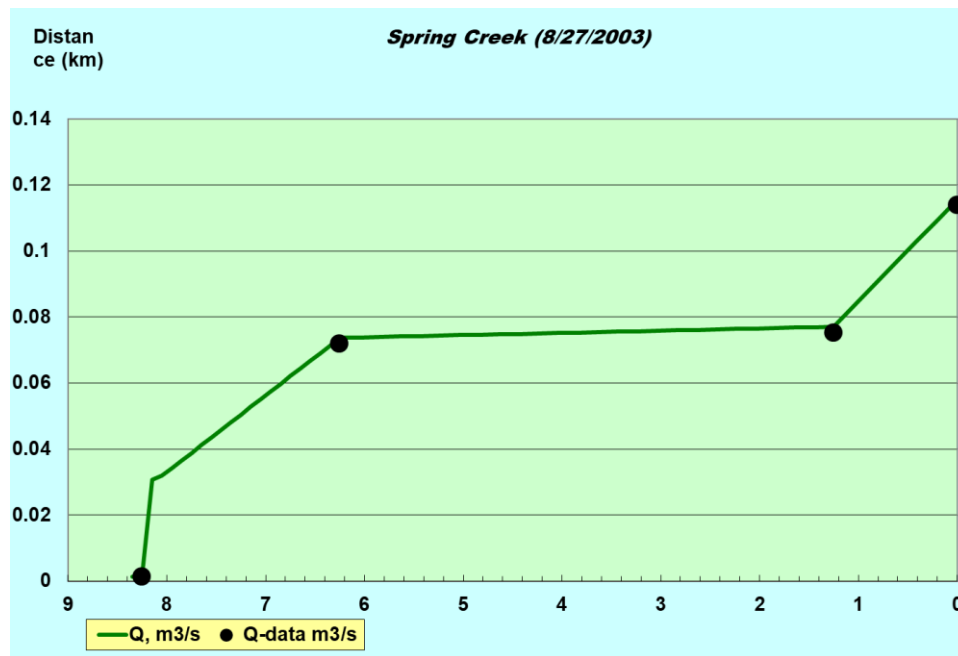
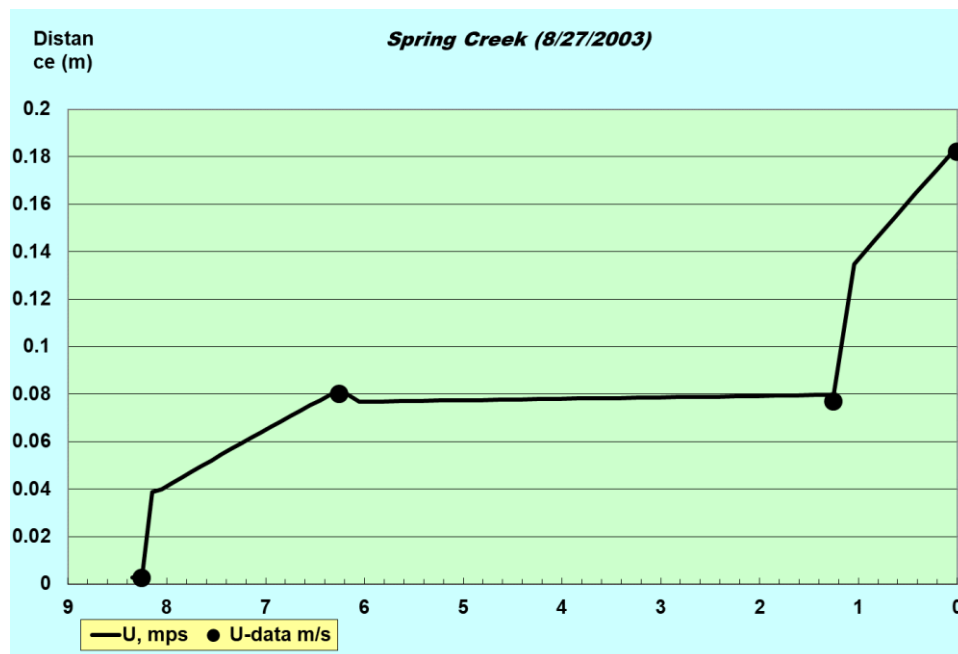
Figure A-5. QUAL2K Calibration Model – Total Phosphorus

Development of Hydraulic Rating Curves

QUAL2K allows rating curves to calculate depth and velocity values from input flow. These rating curves are based on the mathematic relationship between hydraulic parameters in the form $V=aQ^b$ and $H=\alpha Q^\beta$, where V is the average velocity, Q is the flow rate, H is the water level, a/α are coefficients, and b/β are exponents. Regression analysis was used to derive rating curves using observed hydraulic data recorded at sites M1, M3, M4, and M5 on August 27, 2003. The resultant coefficients and exponents are shown in Table A-5. The resulting flow, velocity, and depth outputs are shown in figures A-6 through A-8.

Table A-5. 2021 Calibration Model Rating Curve Coefficients and Exponents

Site	Velocity		Depth	
	Coefficient a	Exponent b	Coefficient α	Exponent β
M1	0.774	0.8608	0.1375	0.0403
M3	0.774	0.8608	0.1375	0.0403
M4	0.724	0.8608	0.1375	0.0403
M5	1.483	0.9656	0.1375	0.0403

**Figure A-6. QUAL2K Calibration Model – Flow****Figure A-7. QUAL2K Calibration Model – Velocity**

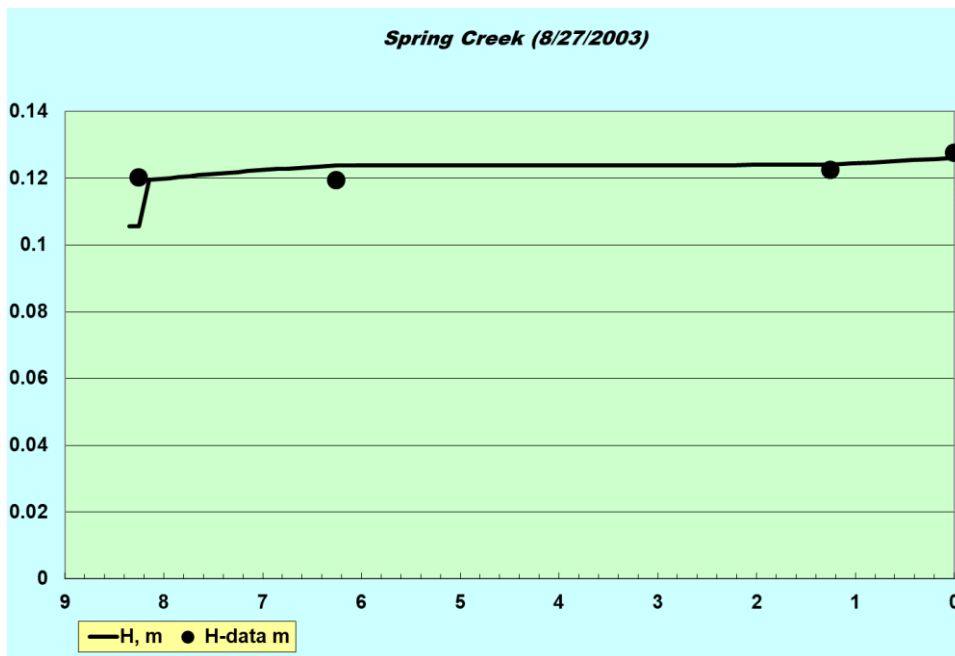


Figure A-8. QUAL2K Calibration Model – Depth

2021 TMDL Wasteload Allocation QUAL2K Model during Low Flow Condition

The rates and formulas assigned to calibrate the QUAL2K model were retained for the wasteload allocation model. The observed flow from August 27, 2003, of 0.05 cfs was used for the headwater flow in the low flow model because this value is even lower than the USGS Stream Stats¹⁸ 7Q10 low flow of 1.32 cfs. Using the observed headwater flow instead of the StreamStats 7Q10 value is a conservative assumption and provides an implicit margin of safety. The 0.741 MGD design capacity was used for the Salem Wastewater Treatment Facility flow. In order to establish appropriate wasteload allocations for the Salem Wastewater Treatment Facility, EPA Level III Ecoregion 39 criteria for natural streams were used as the nitrogen and phosphorus inputs for the headwater so that pollutants from upstream sources were excluded from the model. The calibration values for diffuse sources were maintained. Specific values input into the wasteload allocation model are presented in Tables A-6 through A-8. Dissolved Oxygen, fast CBOD ultimate, nitrogen, and phosphorus input values for the Salem Wastewater Treatment Facility were adjusted to derive the final values in Table A-8. The model demonstrates that the resulting values will result in DO greater than 5.0 mg/L downstream of the Salem Wastewater Treatment Facility.

The low-flow WLA model allows $\text{CBOD}_{\text{ult}} = 6.0 \text{ mg/L}$ at the Salem Wastewater Treatment Facility outfall to maintain dissolved oxygen greater than 5.0 mg/L in Spring Creek. The CBOD_{ult} was converted to CBOD_5 using the equation $\text{CBOD}_{\text{ult}} = \text{CBOD}_5 / (1 - e^{-kt})$ where $k=0.1$ and $t=5$ days. CBOD_5 was then converted to BOD_5 using the equation $\text{BOD}_5 = \text{CBOD}_5 * 1.29$. The final WLA for Salem is $\text{BOD}_5 = 3.05 \text{ mg/L}$.

$$\text{CBOD}_{\text{ult}} = 6.0 \text{ mg/L}$$

¹⁸ StreamStats: Streamflow Statistics and Spatial Analysis Tools for Water-Resources Applications <https://streamstats.usgs.gov/ss/>

$$\text{CBOD}_5 = 6.0 * (1 - e^{(-0.5)}) = 2.36 \text{ mg/L}$$

$$\text{BOD}_5 = 1.5739 * 1.29 = 3.05 \text{ mg/L}$$

Table A-6. Input Values for Headwater in the Wasteload Allocation Model

Field	Value	Source
Headwater - Flow Rate	0.00934 cubic meters per sec.	Available in-stream mixing zone at 7Q10 (1/4 of 1.32 cfs)
Temperature	24°C am/27.0°C pm	Same as calibration model
Dissolved Oxygen	5.0 mg/L	Missouri WQS criterion
Fast CBOD	1.0 mg/L	Minimum value
Organic Nitrogen	35 µg/L	EPA Level III Ecoregion 39 criteria
Ammonia Nitrogen	15 µg/L	EPA Level III Ecoregion 39 criteria
Nitrate	239 µg/L	EPA Level III Ecoregion 39 criteria
Organic Phosphorus	6.5 µg/L (93%)	EPA Level III Ecoregion 39 criteria
Inorganic Phosphorus	0.49 µg/L (7%)	EPA Level III Ecoregion 39 criteria
Phytoplankton	4.2 µg/L minimum 5.0 µg/L maximum	Same as calibration model
Alkalinity	151.0 mgCaCO ₃ /L	Same as calibration model
pH	7.85 minimum 8.70 maximum	Same as calibration model

Table A-7. Input Values for Diffuse Sources in the Wasteload Allocation Model

	Flow (cms)	Temp. (°C)	CBOD (mg/L)	DO (mg/L)	Organic N (ug/L)	NH ₄ -N (ug/L)	Nitrate (ug/L)	Total P (ug/L)
Reach 2	0.0429	15.00	4.00	2.30	25.00	5.00	260.00	0.00
Reach 3	0.0034	18.00	7.00	2.00	100.00	30.00	300.00	0.00
Reach 4	0.0384	20.00	7.00	2.00	100.00	30.00	300.00	0.00

Table A-8. Input Values for Salem WWTF in the Wasteload Allocation Model

Field	Value	Source
Salem WWTF - Flow Rate	0.0325 cubic meters per sec.	Facility Design Flow 0.741 MGD
Temperature	27.0 °C	Same as calibration model
Conductivity	822.5 umhos	Same as calibration model
Dissolved Oxygen	7.5 mg/L	Minimum value that will result in in-stream DO less than or equal to 5.0 mg/L
Fast CBOD	6.0 mg/L	Maximum value that will result in in-stream DO less than or equal to 5.0 mg/L
Ammonia Nitrogen	600 µg/L	Enhanced Nutrient Removal range
Nitrate	12,000 µg/L	Enhanced Nutrient Removal range
Organic Nitrogen	100 µg/L	Enhanced Nutrient Removal range
Organic Phosphorus	465 µg/L	Enhanced Nutrient Removal range
Inorganic Phosphorus	35 µg/L	
Phytoplankton	3.1 µg/L	Same as calibration model
Alkalinity	100 mgCaCO ₃ /L	Model default value
pH	7.65	Same as calibration model

Based on the model inputs presented in the previous sections, the QUAL2K model predicts that dissolved oxygen concentrations will be a minimum of 5.0 mg/L below the Salem wastewater effluent outlet. The graphical QUAL2K wasteload allocation model outputs for dissolved oxygen, nitrogen, and phosphorus are presented in Figures A-9 through A-12.

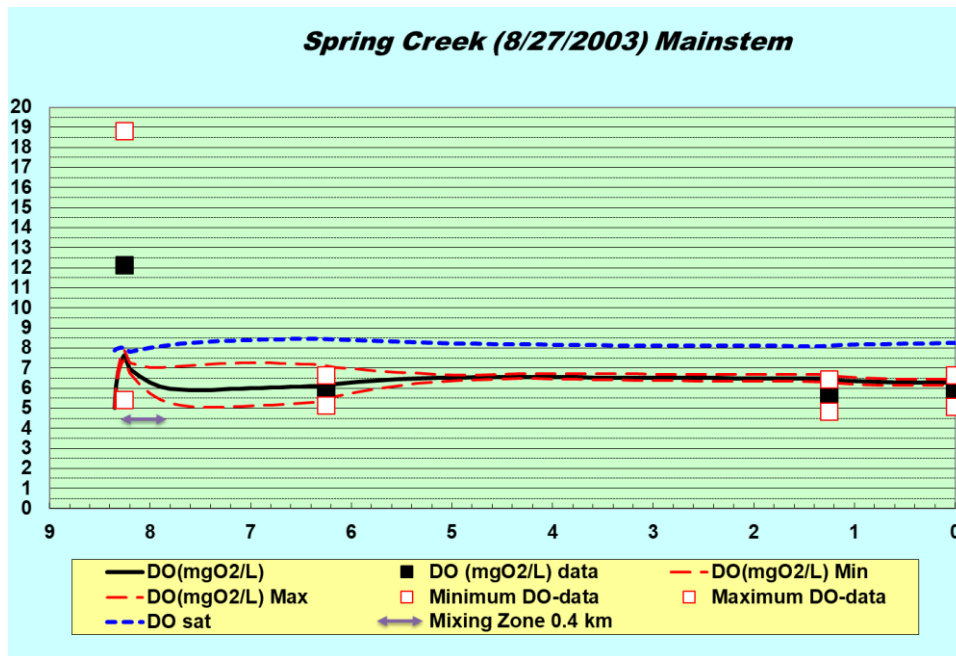


Figure A-9. QUAL2K Wasteload Allocation Model – Dissolved Oxygen

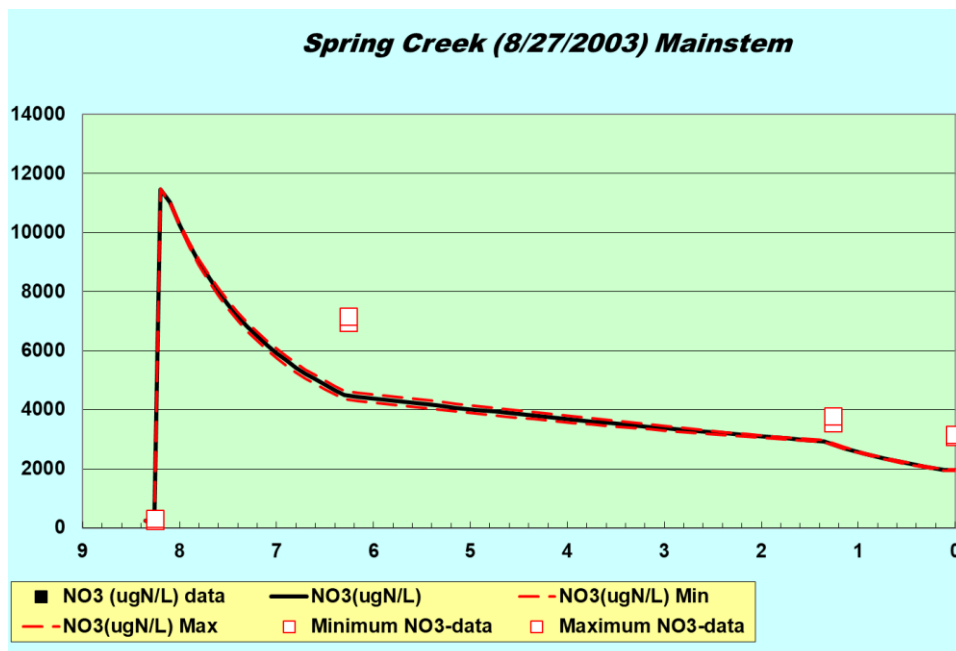


Figure A-10. QUAL2K Wasteload Allocation Model – Nitrate (NO₃)

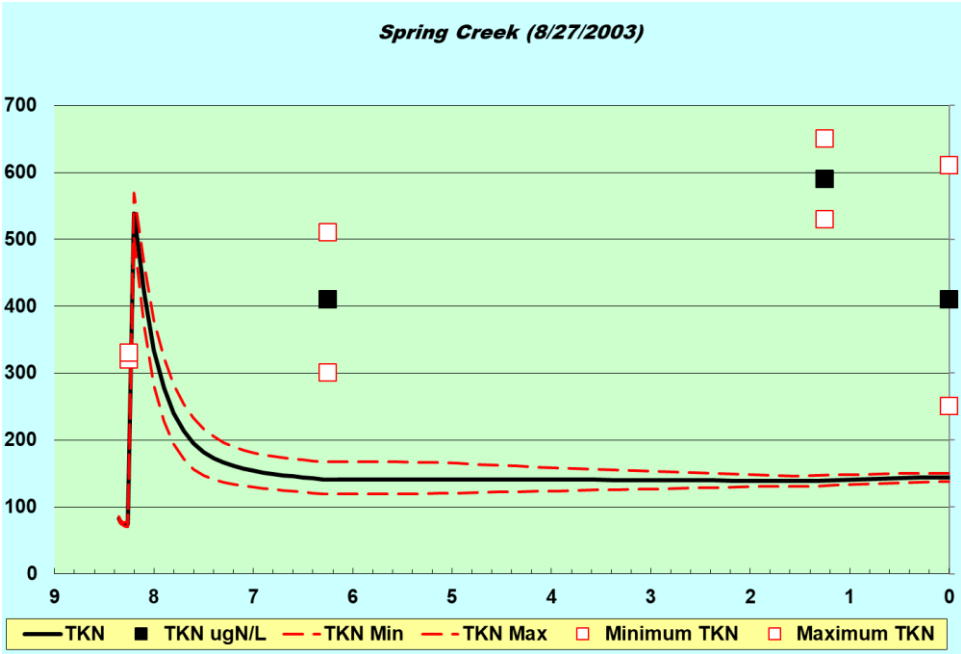


Figure A-11. QUAL2K Wasteload Allocation Model – Total Kjeldahl Nitrogen

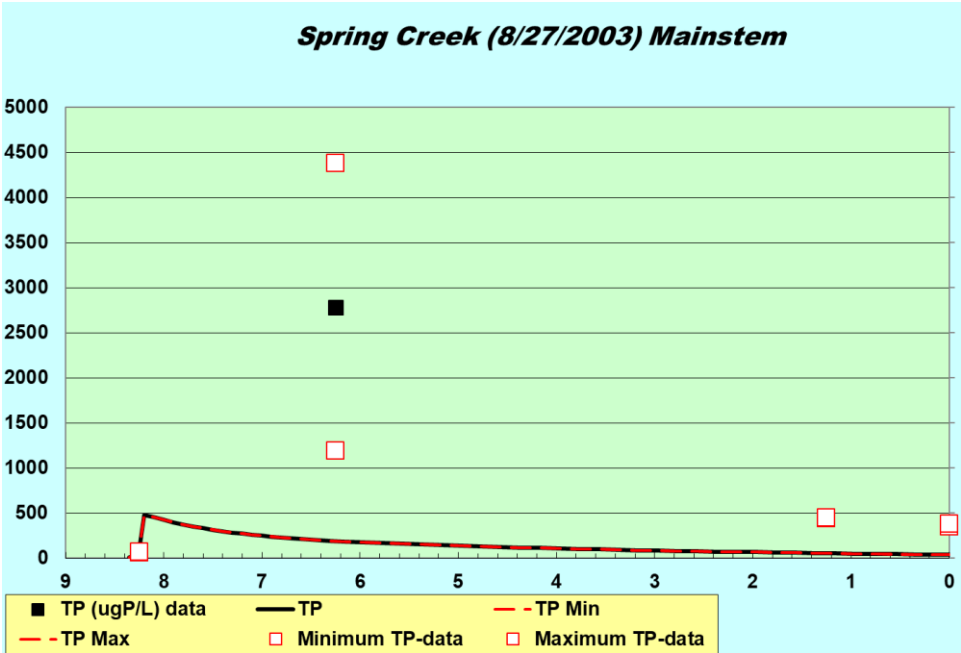


Figure A-12. QUAL2K Wasteload Allocation Model – Total Phosphorus

Appendix B

Total Suspended Solids Load Duration Curve Development

Overview

The load duration curve approach was used to develop the TSS TMDL for Spring Creek. The load duration curve method allows for characterizing water quality concentrations at different flow regimes and estimating the load allocations and wasteload allocations for the impaired segment. This method also provides a visual display of the relationship between stream flow and loading capacity. Using the duration curve framework, allowable loadings are easily presented.

Methodology

The load duration curve method requires a long-term time series of daily flows and a numeric water quality target (typically the applicable numeric criterion or a surrogate when addressing general criteria). When available, pollutant data from the impaired segment is used to provide estimates of observed loads (based on flow estimates for the same date) and are plotted along with the load duration curve to assess when the water quality target may have been exceeded. Such information is useful for determining appropriate best management practices to reduce pollutant loading.

The average daily flow data from a gage or multiple gages that are representative of the impaired reach are used to develop a load duration curve. The flow record should be of sufficient length to be able to calculate percentiles of flow. If a flow record for an impaired stream is not available, then flow data collected from a gage in a representative watershed may be used or a synthetic flow record from several gages can be developed. For Spring Creek, a synthetic flow record was developed using the log discharge per square mile of USGS gages from four streams within the same EDU as Spring Creek. A fifth gage from the Little Piney Creek is located in the adjacent Gasconade EDU was also used in this analysis due to its similarity of the watershed characteristics and its proximity to Spring Creek. These five gages with sufficient flow records are presented in Table B1. Nash-Sutcliffe statistics are calculated for each gage flow record used to develop the synthetic flow in order to determine if the relationship is valid for each record. The Nash-Sutcliffe statistic evaluates the efficiency of a predicted (modeled) flow dataset (Nash and Sutcliffe 1970). An efficiency of 1 (100 percent) describes a perfect match, while values less than zero indicate a poor fit of modeled and observed datasets (USGS 2010). This relationship must be valid in order to use the synthetic flow methodology. Model estimates are considered satisfactory if Nash-Sutcliffe statistics are greater than 50 percent (USGS 2013).

Figure B1 presents the synthesized flow duration curve. Figure B2 is the estimated flow for Spring Creek based on the area corrected synthesized flow and point source design flow discharges added. The estimated flows for Spring Creek, in units of cubic feet per second, were multiplied by the concentration target of 6 mg/L and a conversion factor of 5.394 in order to generate the allowable TSS load in units of lbs/day.¹⁹ Table B2 presents available TSS data from Spring Creek plotted along the load duration to illustrate conditions when excessive sediment loading may be occurring. The concentration target and the facilities' design flows were used to derive the static wasteload allocation assigned to municipal and domestic wastewater treatment facilities. For values below the detection limit, one half the detection limit was used. Selection of the target concentration used a

¹⁹ $Load \left(\frac{lbs}{day} \right) = \left[Target \left(\frac{mg}{100ml} \right) \right] * \left[Flow \left(\frac{feet^3}{s} \right) \right] * [Conversion Factor]$

reference approach and was derived as the 25th percentile of all total suspended solids data in the EDU and provides an implicit margin of safety (Table B3). The load allocation assigned to nonpoint sources is calculated as the remainder of the loading capacity after allocations to point sources. Nonpoint sources are not expected to contribute pollutant loading during critical low flow conditions, therefore load allocations to nonpoint sources at these low flows will likely provide an additional margin of safety.

Table B1. Stream gages used to develop synthetic flow for Spring Creek²⁰

USGS Gage	Drainage Area (mi ²)	Period of Data	Nash-Sutcliffe (%)
07017200 Big River at Irondale, MO	175	1989 - 2019	89
06932000 Little Piney Creek at Newburg, MO	200	1989 - 2019	99
07015720 Bourbeuse River near High Gate, MO	135	1989 - 2019	93
07010350 Meramec River at Cook Station, MO	199	2008 - 2019	100
07014000 Huzzah Creek near Steelville, MO	259	2007 - 2019	100
		Mean:	96

Table B2. Available Total Suspended Solids data from Spring Creek

Site Code	Site Name	Sample Date	TSS (mg/l)
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	7/22/2003	12.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	7/22/2003	6.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	7/22/2003	10.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	7/22/2003	6.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	7/22/2003	8.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	7/22/2003	9.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	7/22/2003	<5.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	7/22/2003	6.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	7/23/2003	9.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	7/23/2003	9.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	7/23/2003	7.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	7/23/2003	8.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	7/23/2003	11.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	7/23/2003	9.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	7/23/2003	7.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	7/23/2003	9.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	8/27/2003	5.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	8/27/2003	9.0

²⁰ Flow data that were in provisional status at the time of this report were not used

Site Code	Site Name	Sample Date	TSS (mg/l)
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	8/27/2003	10.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	8/27/2003	6.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	8/27/2003	8.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	8/27/2003	9.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	8/27/2003	12.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	8/27/2003	8.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	8/28/2003	10.0
1870/4.5	Spring Cr. 5.0 mi.bl. Salem WWTP	8/28/2003	10.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	8/28/2003	13.0
1870/5.3	Spring Cr. 4.2 mi.bl. Salem WWTP	8/28/2003	9.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	8/28/2003	11.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	8/28/2003	8.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	8/28/2003	8.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	8/28/2003	8.0
1870/12.3	Spring Cr. @ Hwy. 32/72	5/29/2008	10.0
1870/5.8	Spring Cr nr CR 322	5/29/2008	20.0
1870/7.4	Spring Cr nr CR 323A	5/29/2008	17.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	5/29/2008	6.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	5/29/2008	12.0
1870/10.1	Spring Cr. @ Hwy. 19	7/18/2008	3.75
1870/11.9	Spring Cr. @ CR 416	7/18/2008	<5.0
1870/12.3	Spring Cr. @ Hwy. 32/72	7/18/2008	5.0
1870/12.3	Spring Cr. @ Hwy. 32/72	9/3/2008	7.0
1870/5.8	Spring Cr nr CR 322	9/3/2008	53.0
1870/7.4	Spring Cr nr CR 323A	9/3/2008	21.0
1870/8.7	Spring Cr. 1.0 mi.bl. Salem WWTP	9/3/2008	<5.0
1870/9.8	Spring Cr. 0.1 mi.ab. Salem WWTP	9/3/2008	<5.0

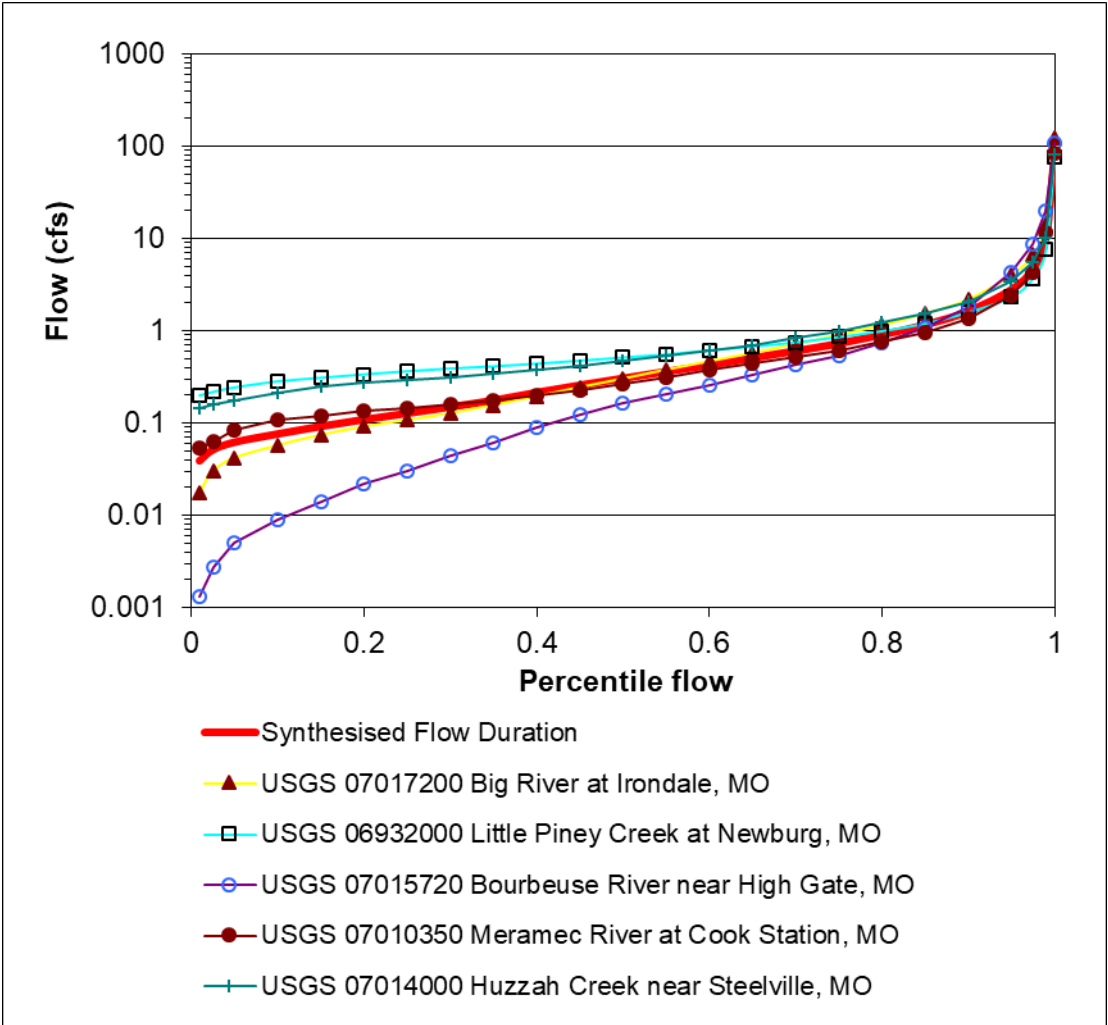


Figure B1. EDU flow duration curve

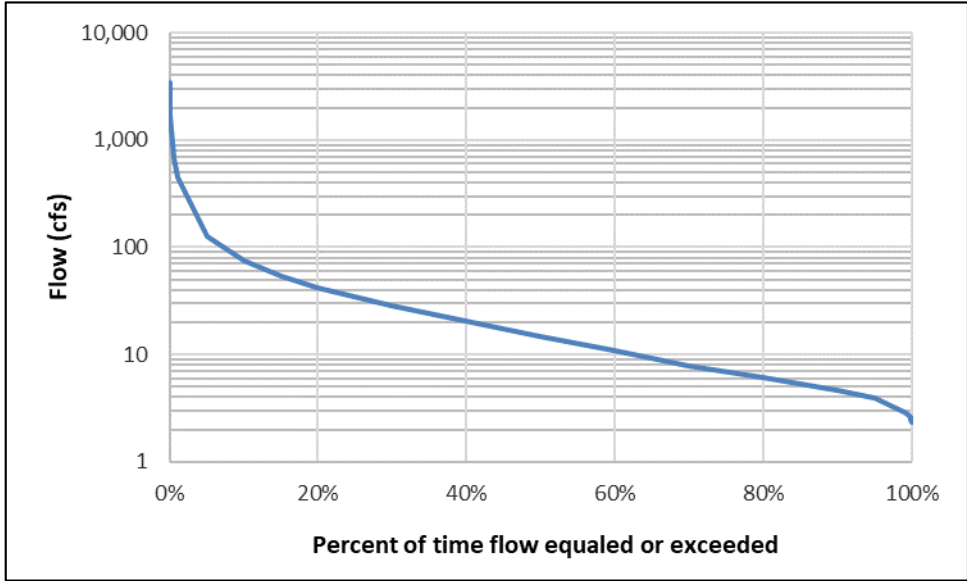


Figure B2. Spring Creek flow duration curve

Table B2. USGS total suspended solids data used to develop TMDL target (sorted by date)

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	8/16/2007	FieldDupl	<10.0
1455/106	Gasconade R. @ Jerome	8/16/2007	FieldDupl	<10.0
1455/106	Gasconade R. @ Jerome	3/23/2016	FieldDupl	<15.0
1455/106	Gasconade R. @ Jerome	11/9/2016	FieldDupl	<15.0
1455/106	Gasconade R. @ Jerome	12/4/2017	FieldDupl	<15.0
1455/106	Gasconade R. @ Jerome	8/13/2018	FieldDupl	<15.0
1455/106	Gasconade R. @ Jerome	1/31/1978	Grab	66.0
1455/106	Gasconade R. @ Jerome	3/23/1978	Grab	121.0
1455/106	Gasconade R. @ Jerome	4/25/1978	Grab	11.0
1455/106	Gasconade R. @ Jerome	5/31/1978	Grab	119.0
1455/106	Gasconade R. @ Jerome	6/28/1978	Grab	86.0
1455/106	Gasconade R. @ Jerome	7/25/1978	Grab	21.0
1455/106	Gasconade R. @ Jerome	8/15/1978	Grab	4.0
1455/106	Gasconade R. @ Jerome	9/13/1978	Grab	3.0
1455/106	Gasconade R. @ Jerome	11/20/1978	Grab	78.0
1455/106	Gasconade R. @ Jerome	12/15/1978	Grab	35.0
1455/106	Gasconade R. @ Jerome	1/29/1979	Grab	3.0
1455/106	Gasconade R. @ Jerome	2/27/1979	Grab	93.0
1455/106	Gasconade R. @ Jerome	3/20/1979	Grab	18.0
1455/106	Gasconade R. @ Jerome	4/24/1979	Grab	13.0
1455/106	Gasconade R. @ Jerome	5/23/1979	Grab	85.0
1455/106	Gasconade R. @ Jerome	6/12/1979	Grab	250.0
1455/106	Gasconade R. @ Jerome	7/2/1979	Grab	206.0
1455/106	Gasconade R. @ Jerome	8/30/1979	Grab	183.0
1455/106	Gasconade R. @ Jerome	11/16/1979	Grab	244.0
1455/106	Gasconade R. @ Jerome	12/5/1979	Grab	304.0
1455/106	Gasconade R. @ Jerome	1/11/1980	Grab	21.0
1455/106	Gasconade R. @ Jerome	2/12/1980	Grab	45.0
1455/106	Gasconade R. @ Jerome	3/14/1980	Grab	79.0
1455/106	Gasconade R. @ Jerome	4/18/1980	Grab	84.0
1455/106	Gasconade R. @ Jerome	5/28/1980	Grab	41.0
1455/106	Gasconade R. @ Jerome	6/12/1980	Grab	11.0
1455/106	Gasconade R. @ Jerome	9/2/1980	Grab	65.0
1455/106	Gasconade R. @ Jerome	11/25/1980	Grab	43.0
1455/106	Gasconade R. @ Jerome	1/20/1981	Grab	19.0
1455/106	Gasconade R. @ Jerome	3/26/1981	Grab	26.0

²¹ For field duplicates, the average of the two values was used and considered a single measurement for calculation purposes. Note that some data were mistakenly identified as a field duplicate in the Department's database, but only a single measurement for the day was taken.

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	5/26/1981	Grab	396.0
1455/106	Gasconade R. @ Jerome	7/28/1981	Grab	218.0
1455/106	Gasconade R. @ Jerome	9/22/1981	Grab	10.0
1455/106	Gasconade R. @ Jerome	11/12/1981	Grab	11.0
1455/106	Gasconade R. @ Jerome	1/12/1982	Grab	12.0
1455/106	Gasconade R. @ Jerome	3/25/1982	Grab	75.0
1455/106	Gasconade R. @ Jerome	5/18/1982	Grab	0
1455/106	Gasconade R. @ Jerome	7/21/1982	Grab	9.0
1455/106	Gasconade R. @ Jerome	9/15/1982	Grab	23.0
1455/106	Gasconade R. @ Jerome	11/16/1982	Grab	18.0
1455/106	Gasconade R. @ Jerome	1/26/1983	Grab	14.0
1455/106	Gasconade R. @ Jerome	3/23/1983	Grab	55.0
1455/106	Gasconade R. @ Jerome	5/19/1983	Grab	39.0
1455/106	Gasconade R. @ Jerome	7/28/1983	Grab	18.0
1455/106	Gasconade R. @ Jerome	9/6/1983	Grab	89.0
1455/106	Gasconade R. @ Jerome	11/29/1983	Grab	20.0
1455/106	Gasconade R. @ Jerome	1/24/1984	Grab	27.0
1455/106	Gasconade R. @ Jerome	3/27/1984	Grab	16.0
1455/106	Gasconade R. @ Jerome	5/30/1984	Grab	98.0
1455/106	Gasconade R. @ Jerome	7/20/1984	Grab	1810.0
1455/106	Gasconade R. @ Jerome	11/27/1984	Grab	36.0
1455/106	Gasconade R. @ Jerome	1/29/1985	Grab	8.0
1455/106	Gasconade R. @ Jerome	3/26/1985	Grab	15.0
1455/106	Gasconade R. @ Jerome	5/29/1985	Grab	3.0
1455/106	Gasconade R. @ Jerome	7/23/1985	Grab	8.0
1455/106	Gasconade R. @ Jerome	9/24/1985	Grab	4.0
1455/106	Gasconade R. @ Jerome	11/26/1985	Grab	29.0
1455/106	Gasconade R. @ Jerome	1/29/1986	Grab	14.0
1455/106	Gasconade R. @ Jerome	3/25/1986	Grab	6.0
1455/106	Gasconade R. @ Jerome	5/7/1986	Grab	61.0
1455/106	Gasconade R. @ Jerome	7/28/1986	Grab	46.0
1455/106	Gasconade R. @ Jerome	9/22/1986	Grab	1.0
1455/106	Gasconade R. @ Jerome	10/28/1986	Grab	20.0
1455/106	Gasconade R. @ Jerome	11/25/1986	Grab	31.0
1455/106	Gasconade R. @ Jerome	12/29/1986	Grab	16.0
1455/106	Gasconade R. @ Jerome	1/26/1987	Grab	11.0
1455/106	Gasconade R. @ Jerome	2/23/1987	Grab	4.0
1455/106	Gasconade R. @ Jerome	3/24/1987	Grab	2.0
1455/106	Gasconade R. @ Jerome	4/20/1987	Grab	7.0
1455/106	Gasconade R. @ Jerome	5/27/1987	Grab	8.0
1455/106	Gasconade R. @ Jerome	7/29/1987	Grab	4.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	8/26/1987	Grab	19.0
1455/106	Gasconade R. @ Jerome	9/23/1987	Grab	5.0
1455/106	Gasconade R. @ Jerome	10/27/1987	Grab	63.0
1455/106	Gasconade R. @ Jerome	11/24/1987	Grab	34.0
1455/106	Gasconade R. @ Jerome	12/4/1987	Grab	27.0
1455/106	Gasconade R. @ Jerome	1/13/1988	Grab	21.0
1455/106	Gasconade R. @ Jerome	2/1/1988	Grab	77.0
1455/106	Gasconade R. @ Jerome	3/3/1988	Grab	35.0
1455/106	Gasconade R. @ Jerome	4/8/1988	Grab	28.0
1455/106	Gasconade R. @ Jerome	5/9/1988	Grab	7.0
1455/106	Gasconade R. @ Jerome	7/11/1988	Grab	15.0
1455/106	Gasconade R. @ Jerome	8/3/1988	Grab	79.0
1455/106	Gasconade R. @ Jerome	9/7/1988	Grab	4.0
1455/106	Gasconade R. @ Jerome	10/31/1988	Grab	15.0
1455/106	Gasconade R. @ Jerome	12/13/1988	Grab	1.0
1455/106	Gasconade R. @ Jerome	1/9/1989	Grab	10.0
1455/106	Gasconade R. @ Jerome	2/6/1989	Grab	7.0
1455/106	Gasconade R. @ Jerome	4/10/1989	Grab	21.0
1455/106	Gasconade R. @ Jerome	5/15/1989	Grab	28.0
1455/106	Gasconade R. @ Jerome	6/6/1989	Grab	37.0
1455/106	Gasconade R. @ Jerome	7/18/1989	Grab	10.0
1455/106	Gasconade R. @ Jerome	9/15/1989	Grab	11.0
1455/106	Gasconade R. @ Jerome	1/22/1990	Grab	195.0
1455/106	Gasconade R. @ Jerome	3/20/1990	Grab	32.0
1455/106	Gasconade R. @ Jerome	5/7/1990	Grab	48.0
1455/106	Gasconade R. @ Jerome	7/9/1990	Grab	41.0
1455/106	Gasconade R. @ Jerome	9/4/1990	Grab	5.0
1455/106	Gasconade R. @ Jerome	11/14/1990	Grab	11.0
1455/106	Gasconade R. @ Jerome	1/10/1991	Grab	5.0
1455/106	Gasconade R. @ Jerome	3/7/1991	Grab	8.0
1455/106	Gasconade R. @ Jerome	5/10/1991	Grab	57.0
1455/106	Gasconade R. @ Jerome	7/19/1991	Grab	14.0
1455/106	Gasconade R. @ Jerome	9/3/1991	Grab	12.0
1455/106	Gasconade R. @ Jerome	11/6/1991	Grab	22.0
1455/106	Gasconade R. @ Jerome	1/10/1992	Grab	10.0
1455/106	Gasconade R. @ Jerome	2/23/1993	Grab	42.0
1455/106	Gasconade R. @ Jerome	5/18/1993	Grab	642.0
1455/106	Gasconade R. @ Jerome	6/10/1993	Grab	56.0
1455/106	Gasconade R. @ Jerome	11/6/1997	Grab	4.0
1455/106	Gasconade R. @ Jerome	1/21/1998	Grab	13.0
1455/106	Gasconade R. @ Jerome	6/18/1998	Grab	20.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	8/3/1998	Grab	27.0
1455/106	Gasconade R. @ Jerome	1/5/1999	Grab	<1.0
1455/106	Gasconade R. @ Jerome	6/23/1999	Grab	1.0
1455/106	Gasconade R. @ Jerome	8/12/1999	Grab	5.0
1455/106	Gasconade R. @ Jerome	11/16/1999	Grab	<1.0
1455/106	Gasconade R. @ Jerome	1/13/2000	Grab	2.0
1455/106	Gasconade R. @ Jerome	5/16/2000	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/5/2000	Grab	14.0
1455/106	Gasconade R. @ Jerome	11/21/2000	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/9/2001	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/3/2001	Grab	14.0
1455/106	Gasconade R. @ Jerome	7/18/2001	Grab	13.0
1455/106	Gasconade R. @ Jerome	10/22/2001	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/19/2001	Grab	12.0
1455/106	Gasconade R. @ Jerome	12/4/2001	Grab	34.0
1455/106	Gasconade R. @ Jerome	1/28/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	2/13/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	3/26/2002	Grab	54.0
1455/106	Gasconade R. @ Jerome	4/9/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/20/2002	Grab	69.0
1455/106	Gasconade R. @ Jerome	6/11/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/16/2002	Grab	10.0
1455/106	Gasconade R. @ Jerome	8/12/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	9/3/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	10/1/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/13/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	12/5/2002	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/15/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	2/4/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	3/5/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	4/8/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/8/2003	Grab	71.0
1455/106	Gasconade R. @ Jerome	6/9/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/28/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	8/7/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	9/5/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	10/29/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/21/2003	Grab	154.0
1455/106	Gasconade R. @ Jerome	12/22/2003	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/20/2004	Grab	31.0
1455/106	Gasconade R. @ Jerome	2/4/2004	Grab	21.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	3/10/2004	Grab	12.0
1455/106	Gasconade R. @ Jerome	4/20/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/19/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	6/14/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/8/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	9/21/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	10/13/2004	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/18/2004	Grab	10.0
1455/106	Gasconade R. @ Jerome	12/10/2004	Grab	39.0
1455/106	Gasconade R. @ Jerome	1/19/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	2/1/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	3/2/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	4/5/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/23/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	6/9/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/7/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	8/1/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	8/11/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	9/1/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	10/13/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/22/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	12/20/2005	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/10/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	2/6/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	3/22/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	4/25/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	5/8/2006	Grab	24.0
1455/106	Gasconade R. @ Jerome	6/6/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/5/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	8/1/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	9/7/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	10/4/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/2/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	12/11/2006	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/23/2007	Grab	19.0
1455/106	Gasconade R. @ Jerome	2/7/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	3/14/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	4/25/2007	Grab	10.0
1455/106	Gasconade R. @ Jerome	5/8/2007	Grab	12.0
1455/106	Gasconade R. @ Jerome	6/4/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	7/11/2007	Grab	25.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	9/10/2007	Grab	15.0
1455/106	Gasconade R. @ Jerome	10/17/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	11/19/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	12/4/2007	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/9/2008	Grab	260.0
1455/106	Gasconade R. @ Jerome	2/6/2008	Grab	62.0
1455/106	Gasconade R. @ Jerome	3/18/2008	Grab	246.0
1455/106	Gasconade R. @ Jerome	4/2/2008	Grab	100.0
1455/106	Gasconade R. @ Jerome	5/14/2008	Grab	<20.0
1455/106	Gasconade R. @ Jerome	6/3/2008	Grab	41.0
1455/106	Gasconade R. @ Jerome	7/31/2008	Grab	<10.0
1455/106	Gasconade R. @ Jerome	8/4/2008	Grab	16.0
1455/106	Gasconade R. @ Jerome	9/3/2008	Grab	<10.0
1455/106	Gasconade R. @ Jerome	1/26/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/2/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/16/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/6/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/18/2009	Grab	18.0
1455/106	Gasconade R. @ Jerome	6/1/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/6/2009	Grab	24.0
1455/106	Gasconade R. @ Jerome	8/17/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/2/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/5/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/2/2009	Grab	85.0
1455/106	Gasconade R. @ Jerome	12/7/2009	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/19/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/3/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/8/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/5/2010	Grab	44.0
1455/106	Gasconade R. @ Jerome	5/3/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/3/2010	Grab	80.0
1455/106	Gasconade R. @ Jerome	7/6/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/2/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/1/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/12/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/9/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/1/2010	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/10/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/7/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/29/2011	Grab	29.0
1455/106	Gasconade R. @ Jerome	4/19/2011	Grab	38.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	5/9/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/6/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/25/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/8/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/6/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/6/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/2/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/5/2011	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/17/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/15/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/12/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/2/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/7/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/5/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/22/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/4/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/17/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/4/2012	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/14/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/6/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/5/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/1/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/21/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/3/2013	Grab	56.0
1455/106	Gasconade R. @ Jerome	7/15/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/29/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/4/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/28/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/4/2013	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/2/2013	Grab	<30.0
1455/106	Gasconade R. @ Jerome	1/15/2014	Grab	30.0
1455/106	Gasconade R. @ Jerome	2/10/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/17/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/7/2014	Grab	<21.0
1455/106	Gasconade R. @ Jerome	5/5/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/3/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/9/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/5/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/4/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/14/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/4/2014	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1455/106	Gasconade R. @ Jerome	12/15/2014	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/14/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/3/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/3/2015	Grab	<30.0
1455/106	Gasconade R. @ Jerome	4/13/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/18/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/9/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/15/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/10/2015	Grab	33.0
1455/106	Gasconade R. @ Jerome	9/2/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/7/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/16/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/7/2015	Grab	<15.0
1455/106	Gasconade R. @ Jerome	1/19/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/1/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/11/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/12/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/6/2016	Grab	43.0
1455/106	Gasconade R. @ Jerome	7/11/2016	Grab	18.0
1455/106	Gasconade R. @ Jerome	8/22/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/6/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/25/2016	Grab	<15.0
1455/106	Gasconade R. @ Jerome	12/5/2016	Grab	<21.0
1455/106	Gasconade R. @ Jerome	1/3/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/6/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/27/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/18/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/10/2017	Grab	15.0
1455/106	Gasconade R. @ Jerome	6/5/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/24/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	8/15/2017	Grab	16.0
1455/106	Gasconade R. @ Jerome	9/5/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	10/23/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	11/13/2017	Grab	<15.0
1455/106	Gasconade R. @ Jerome	2/14/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	3/6/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	4/9/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	5/14/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	6/5/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	7/17/2018	Grab	<15.0
1455/106	Gasconade R. @ Jerome	9/10/2018	Grab	23.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	4/4/2016	FieldDupl	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/6/2018	FieldDupl	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/14/1977	Grab	32.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/4/1977	Grab	11.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/8/1977	Grab	30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/13/1977	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/15/1977	Grab	48.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/4/1978	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/6/1978	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/7/1978	Grab	57.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/6/1978	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/16/1978	Grab	14.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/15/1978	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/26/1978	Grab	27.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/24/1978	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/14/1978	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/26/1978	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/30/1978	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/20/1978	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/23/1979	Grab	11.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/14/1979	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/15/1979	Grab	15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/10/1979	Grab	52.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/24/1979	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/20/1979	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/25/1979	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/23/1979	Grab	27.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/19/1979	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/18/1979	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/29/1979	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/20/1979	Grab	0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/18/1980	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/22/1980	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/21/1980	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/4/1980	Grab	20.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/8/1980	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/5/1980	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/10/1980	Grab	206.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/14/1980	Grab	21.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/18/1980	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/9/1980	Grab	4.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	11/6/1980	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/4/1980	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/8/1981	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/12/1981	Grab	220.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/5/1981	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/9/1981	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/7/1981	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/5/1981	Grab	20.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/9/1981	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/6/1981	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/4/1981	Grab	17.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/7/1981	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/1981	Grab	60.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/2/1981	Grab	22.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/7/1982	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/18/1982	Grab	148.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/11/1982	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/7/1982	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/13/1982	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/16/1982	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/16/1982	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/11/1982	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/24/1982	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/21/1982	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/1982	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/1/1982	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/15/1982	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/7/1983	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/1/1983	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/10/1983	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/20/1983	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/13/1983	Grab	15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/14/1983	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/21/1983	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/18/1983	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/30/1983	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/4/1983	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/17/1983	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/20/1983	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/18/1984	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/23/1984	Grab	5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	3/21/1984	Grab	60.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/19/1984	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/10/1984	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/20/1984	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/18/1984	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/15/1984	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/19/1984	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/11/1984	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/9/1984	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/6/1984	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/11/1985	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/21/1985	Grab	71.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/14/1985	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/4/1985	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/10/1985	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/12/1985	Grab	48.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/12/1985	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/7/1985	Grab	73.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/19/1985	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/18/1985	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/22/1985	Grab	34.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/12/1985	Grab	78.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/10/1986	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/13/1986	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/13/1986	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/10/1986	Grab	11.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/16/1986	Grab	26.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/12/1986	Grab	43.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/11/1986	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/27/1986	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/19/1986	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/23/1986	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/21/1986	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/18/1986	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/12/1987	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/6/1987	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/5/1987	Grab	11.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/9/1987	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/14/1987	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/9/1987	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/9/1987	Grab	53.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	8/13/1987	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/17/1987	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/8/1987	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/1987	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/9/1987	Grab	53.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/14/1988	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/4/1988	Grab	27.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/4/1988	Grab	53.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/8/1988	Grab	26.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/19/1988	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/3/1988	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/14/1988	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/5/1988	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/15/1988	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/13/1988	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/8/1988	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/7/1988	Grab	11.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/13/1989	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/9/1989	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/15/1989	Grab	18.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/5/1989	Grab	31.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/5/1989	Grab	36.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/7/1989	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/20/1989	Grab	3.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/4/1989	Grab	9.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/13/1989	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/10/1989	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/7/1989	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/4/1989	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/18/1990	Grab	18.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/13/1990	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/20/1990	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/10/1990	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/8/1990	Grab	138.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/4/1990	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/9/1992	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/10/1992	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/19/1993	Grab	30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/23/1993	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/15/1993	Grab	1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/8/1993	Grab	15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	5/19/1993	Grab	76.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/1/1993	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/6/1993	Grab	26.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/12/1993	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/30/1993	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/6/1993	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/3/1993	Grab	8.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/20/1994	Grab	4.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/23/1994	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/31/1994	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/2/1994	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/4/1995	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/12/1995	Grab	40.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/2/1995	Grab	22.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/21/1995	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/22/1996	Grab	7.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/3/1996	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/20/1996	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/13/1996	Grab	6.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/14/1997	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/17/1997	Grab	29.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/6/1997	Grab	12.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/12/1997	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/23/1998	Grab	5.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/3/1998	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/6/1998	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/16/1998	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/19/1999	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/29/1999	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/10/1999	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/16/1999	Grab	<1.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/11/2000	Grab	2.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/18/2000	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/5/2000	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/7/2000	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/24/2001	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/14/2001	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/25/2001	Grab	14.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/23/2001	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/1/2001	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/5/2001	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	1/23/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/12/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/28/2002	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/10/2002	Grab	20.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/23/2002	Grab	26.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/20/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/30/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/12/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/3/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/1/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/14/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/2/2002	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/14/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/4/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/4/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/8/2003	Grab	18.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/5/2003	Grab	46.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/9/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/30/2003	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/6/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/4/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/20/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/13/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/17/2003	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/21/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/9/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/2/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/20/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/4/2004	Grab	38.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/1/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/19/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/1/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/14/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/3/2004	Grab	36.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/14/2004	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/3/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/2/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/10/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/5/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/4/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/8/2005	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	7/25/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/1/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/17/2005	Grab	15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/1/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/12/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/9/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/5/2005	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/9/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/7/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/6/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/12/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/17/2006	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/14/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/20/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/15/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/5/2006	Grab	10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/11/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/7/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/4/2006	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/8/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/15/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/13/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/2/2007	Grab	42.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/21/2007	Grab	23.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/5/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/10/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/13/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/5/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/23/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/5/2007	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/24/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/6/2008	Grab	114.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/25/2008	Grab	22.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/15/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/21/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/3/2008	Grab	13.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/22/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/5/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/2/2008	Grab	<10.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/20/2009	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	2/3/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/23/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/20/2009	Grab	89.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/27/2009	Grab	<30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/1/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/21/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/24/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/2/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/29/2009	Grab	29.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/4/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/3/2009	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/19/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/1/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/23/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/19/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/25/2010	Grab	24.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/16/2010	Grab	<30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/12/2010	Grab	37.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/9/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/7/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/20/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/1/2010	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/5/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/7/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/23/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/4/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/2/2011	Grab	95.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/15/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/12/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/9/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/6/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/24/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/7/2011	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/6/2011	Grab	18.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/31/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/6/2012	Grab	20.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/6/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/9/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/1/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/4/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/30/2012	Grab	30.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	8/7/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/4/2012	Grab	17.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/1/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/4/2012	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/28/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/5/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/5/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/1/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/21/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/5/2013	Grab	<30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/23/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/20/2013	Grab	19.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/17/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/12/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/9/2013	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/13/2014	Grab	33.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/18/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/25/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/7/2014	Grab	16.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/13/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/16/2014	Grab	25.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/16/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/11/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/2/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/7/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/5/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/2/2014	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/6/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/24/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/10/2015	Grab	17.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/20/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/4/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/22/2015	Grab	45.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/20/2015	Grab	<30.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/17/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/16/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/19/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/16/2015	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/1/2015	Grab	15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/12/2016	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1846/4.1	Meramec R. nr. Sullivan,MO.	2/29/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/7/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/10/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/6/2016	Grab	18.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/26/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/1/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/13/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/3/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/7/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/5/2016	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/17/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/7/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/7/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/3/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/23/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/20/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/17/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	8/1/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/12/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/10/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	11/6/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	12/4/2017	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	1/17/2018	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	2/12/2018	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	3/28/2018	Grab	248.0
1846/4.1	Meramec R. nr. Sullivan,MO.	4/17/2018	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	5/21/2018	Grab	326.0
1846/4.1	Meramec R. nr. Sullivan,MO.	6/11/2018	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	7/10/2018	Grab	<15.0
1846/4.1	Meramec R. nr. Sullivan,MO.	9/11/2018	Grab	26.0
1846/4.1	Meramec R. nr. Sullivan,MO.	10/3/2018	Grab	<15.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	1/20/1994	Grab	8.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	6/23/1994	Grab	8.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	1/13/1995	Grab	4.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	6/7/1995	Grab	4.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	1/18/1996	Grab	<1.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	6/25/1996	Grab	<1.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	1/20/1997	Grab	3.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	6/19/1997	Grab	6.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	11/16/1999	Grab	<1.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	5/17/2000	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1860/8.2/0.6	Maramec Spring Br. At Bridge	11/8/2000	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	5/14/2001	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	11/2/2001	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	1/28/2002	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	3/21/2002	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	5/21/2002	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	7/29/2002	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	9/5/2002	Grab	<10.0
1860/8.2/0.6	Maramec Spring Br. At Bridge	11/13/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/13/2007	FieldDupl	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/13/2007	FieldDupl	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/25/2016	FieldDupl	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/11/2017	FieldDupl	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/28/2018	FieldDupl	54.0
1903/6.9	Huzzah Cr. @Hwy 8	1/19/1994	Grab	2.0
1903/6.9	Huzzah Cr. @Hwy 8	6/23/1994	Grab	6.0
1903/6.9	Huzzah Cr. @Hwy 8	1/13/1995	Grab	8.0
1903/6.9	Huzzah Cr. @Hwy 8	6/7/1995	Grab	12.0
1903/6.9	Huzzah Cr. @Hwy 8	1/17/1996	Grab	<1.0
1903/6.9	Huzzah Cr. @Hwy 8	6/24/1996	Grab	<1.0
1903/6.9	Huzzah Cr. @Hwy 8	1/29/1997	Grab	1.0
1903/6.9	Huzzah Cr. @Hwy 8	6/19/1997	Grab	2.0
1903/6.9	Huzzah Cr. @Hwy 8	1/12/1998	Grab	3.0
1903/6.9	Huzzah Cr. @Hwy 8	6/15/1998	Grab	<1.0
1903/6.9	Huzzah Cr. @Hwy 8	1/8/1999	Grab	<1.0
1903/6.9	Huzzah Cr. @Hwy 8	6/14/1999	Grab	1.0
1903/6.9	Huzzah Cr. @Hwy 8	11/15/1999	Grab	<1.0
1903/6.9	Huzzah Cr. @Hwy 8	5/17/2000	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/6/2000	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/15/2000	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/10/2001	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/11/2001	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/1/2001	Grab	58.0
1903/6.9	Huzzah Cr. @Hwy 8	1/23/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/28/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/9/2002	Grab	49.0
1903/6.9	Huzzah Cr. @Hwy 8	7/30/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/3/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/12/2002	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/13/2003	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/3/2003	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1903/6.9	Huzzah Cr. @Hwy 8	5/6/2003	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/29/2003	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/11/2003	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/10/2003	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/8/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/17/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/5/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/27/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/2/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/9/2004	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/4/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/1/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/18/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/6/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/7/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/22/2005	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/10/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/21/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/9/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/6/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/5/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/8/2006	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/9/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	2/14/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/14/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	4/2/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/22/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	6/5/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/4/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	11/5/2007	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/22/2008	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	3/24/2008	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	5/19/2008	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	7/21/2008	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	9/2/2008	Grab	<10.0
1903/6.9	Huzzah Cr. @Hwy 8	1/21/2009	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/23/2009	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/26/2009	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/21/2009	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/1/2009	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/27/2009	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1903/6.9	Huzzah Cr. @Hwy 8	1/20/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/24/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/24/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/14/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/7/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/20/2010	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/4/2011	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/21/2011	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/2/2011	Grab	22.0
1903/6.9	Huzzah Cr. @Hwy 8	7/13/2011	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/6/2011	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/24/2011	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/23/2012	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/6/2012	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/3/2012	Grab	25.0
1903/6.9	Huzzah Cr. @Hwy 8	7/16/2012	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/4/2012	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/1/2012	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/28/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/4/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/20/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/22/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/16/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	11/12/2013	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/15/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/26/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/12/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/16/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/4/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/9/2014	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/7/2015	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/10/2015	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/6/2015	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/20/2015	Grab	<30.0
1903/6.9	Huzzah Cr. @Hwy 8	9/15/2015	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/26/2015	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/13/2016	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/7/2016	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/24/2016	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/14/2016	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/5/2016	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1903/6.9	Huzzah Cr. @Hwy 8	1/18/2017	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	3/6/2017	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/22/2017	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	7/18/2017	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	10/31/2017	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	1/17/2018	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	5/21/2018	Grab	190.0
1903/6.9	Huzzah Cr. @Hwy 8	7/9/2018	Grab	<15.0
1903/6.9	Huzzah Cr. @Hwy 8	9/10/2018	Grab	19.0
1903/6.9	Huzzah Cr. @Hwy 8	10/1/2018	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/24/2016	FieldDupl	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/5/2016	FieldDupl	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/10/2018	FieldDupl	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/19/1994	Grab	2.0
1943/15.7	Courtois Cr. @Hwy 8	6/23/1994	Grab	14.0
1943/15.7	Courtois Cr. @Hwy 8	1/12/1995	Grab	6.0
1943/15.7	Courtois Cr. @Hwy 8	6/7/1995	Grab	12.0
1943/15.7	Courtois Cr. @Hwy 8	1/17/1996	Grab	1.0
1943/15.7	Courtois Cr. @Hwy 8	6/24/1996	Grab	<1.0
1943/15.7	Courtois Cr. @Hwy 8	1/29/1997	Grab	2.0
1943/15.7	Courtois Cr. @Hwy 8	6/19/1997	Grab	2.0
1943/15.7	Courtois Cr. @Hwy 8	1/12/1998	Grab	3.0
1943/15.7	Courtois Cr. @Hwy 8	6/15/1998	Grab	<1.0
1943/15.7	Courtois Cr. @Hwy 8	1/7/1999	Grab	<1.0
1943/15.7	Courtois Cr. @Hwy 8	6/14/1999	Grab	<1.0
1943/15.7	Courtois Cr. @Hwy 8	11/15/1999	Grab	<1.0
1943/15.7	Courtois Cr. @Hwy 8	5/17/2000	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/15/2000	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/10/2001	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/1/2001	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/23/2002	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/28/2002	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/9/2002	Grab	73.0
1943/15.7	Courtois Cr. @Hwy 8	7/30/2002	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/3/2002	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/12/2002	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/13/2003	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/3/2003	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/6/2003	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/29/2003	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/11/2003	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1943/15.7	Courtois Cr. @Hwy 8	11/10/2003	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/8/2004	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/17/2004	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/5/2004	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/27/2004	Grab	10.0
1943/15.7	Courtois Cr. @Hwy 8	9/2/2004	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/9/2004	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/4/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/1/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/18/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/6/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/7/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/22/2005	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/10/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/21/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/9/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/6/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/5/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/8/2006	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/9/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	2/14/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/14/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	4/2/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/22/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	6/5/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/10/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/4/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	11/5/2007	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/23/2008	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	3/24/2008	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	5/19/2008	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	7/21/2008	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	9/2/2008	Grab	<10.0
1943/15.7	Courtois Cr. @Hwy 8	1/21/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/23/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/26/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/21/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/1/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/27/2009	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/20/2010	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/24/2010	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1943/15.7	Courtois Cr. @Hwy 8	5/24/2010	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/14/2010	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/7/2010	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/20/2010	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/4/2011	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/21/2011	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/2/2011	Grab	20.0
1943/15.7	Courtois Cr. @Hwy 8	7/13/2011	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/6/2011	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/24/2011	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/23/2012	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/6/2012	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/3/2012	Grab	19.0
1943/15.7	Courtois Cr. @Hwy 8	7/16/2012	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/4/2012	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/1/2012	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/28/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/4/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/20/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/22/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/16/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	11/12/2013	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/15/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/26/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/12/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/16/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/4/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/9/2014	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/7/2015	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/10/2015	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/6/2015	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/20/2015	Grab	<30.0
1943/15.7	Courtois Cr. @Hwy 8	9/15/2015	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/26/2015	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/13/2016	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/7/2016	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	7/25/2016	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/14/2016	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/18/2017	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/6/2017	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/22/2017	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
1943/15.7	Courtois Cr. @Hwy 8	7/18/2017	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	9/11/2017	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/31/2017	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	1/17/2018	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	3/28/2018	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	5/21/2018	Grab	130.0
1943/15.7	Courtois Cr. @Hwy 8	7/9/2018	Grab	<15.0
1943/15.7	Courtois Cr. @Hwy 8	10/1/2018	Grab	<30.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/15/2006	FieldDupl	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/15/2006	FieldDupl	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/5/1973	Grab	6.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/20/1973	Grab	34.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/1/1973	Grab	4.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/12/1992	Grab	15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/22/1993	Grab	10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/24/1993	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/18/1993	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/7/1993	Grab	9.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/17/1993	Grab	7.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/3/1993	Grab	3.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/9/1993	Grab	6.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/10/1993	Grab	12.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/22/1993	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/20/1993	Grab	1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/5/1994	Grab	2.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/15/1994	Grab	20.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/23/1995	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/19/1995	Grab	8.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/29/1996	Grab	1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/10/1996	Grab	1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/21/1997	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/10/1997	Grab	4.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/13/1998	Grab	4.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/17/1998	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/26/1999	Grab	1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/17/1999	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/1/1999	Grab	<1.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/8/2000	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/13/2000	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/10/2001	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/14/2001	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/22/2002	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/5/2002	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/13/2002	Grab	36.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/15/2002	Grab	<40.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/5/2002	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/19/2002	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/6/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/11/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/19/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/5/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/7/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/17/2003	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/22/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/15/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/5/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/6/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/7/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/22/2004	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/25/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/15/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/19/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/18/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/1/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/2/2005	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/4/2006	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/1/2006	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/8/2006	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/10/2006	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/11/2006	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/24/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/14/2007	Grab	18.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/5/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/3/2007	Grab	10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/2/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/11/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/16/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/4/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/26/2007	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/15/2008	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/10/2008	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/5/2008	Grab	<10.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/7/2008	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/8/2008	Grab	<10.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/12/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/2/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/28/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/6/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/9/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/28/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/9/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/1/2009	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/19/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/18/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/8/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/7/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/24/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/14/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/27/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/16/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/7/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/27/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/1/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/1/2010	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/10/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/8/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/21/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/12/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/12/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/13/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/6/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/1/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/7/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/18/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/1/2011	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/5/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/23/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/7/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/2/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/8/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/4/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/7/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/4/2012	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/9/2012	Grab	<30.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/19/2012	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/31/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/11/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/19/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/9/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/28/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/10/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/15/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/6/2013	Grab	29.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/16/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/12/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/4/2013	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/13/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/11/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/24/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/14/2014	Grab	16.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/12/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/17/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/18/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/16/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/3/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/2/2014	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/27/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/3/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/17/2015	Grab	<30.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/6/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/26/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/15/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/13/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/3/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/1/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/13/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/2/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/8/2015	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/19/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/22/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/1/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/11/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/3/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/13/2016	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/5/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/8/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/6/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/18/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/1/2016	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/5/2016	Grab	<25.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/18/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/6/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/21/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/3/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/30/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/12/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/31/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/23/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/6/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	10/30/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	11/27/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	12/11/2017	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	1/16/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	2/26/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	3/14/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	4/16/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	5/2/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	6/11/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	7/23/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	8/8/2018	Grab	<15.0
2681/2.2	Jacks Fk. bl. Shawnee Cr.	9/4/2018	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/17/2005	Grab	520.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/22/2005	Grab	34.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/29/2005	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/5/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/12/2006	Grab	71.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/17/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/24/2006	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/31/2006	Grab	16.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/7/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/14/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/21/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/28/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/7/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/14/2006	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/21/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/28/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/4/2006	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/11/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/18/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/25/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/2/2006	Grab	14.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/9/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/16/2006	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/23/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/30/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/6/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/13/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/20/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/27/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/3/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/11/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/18/2006	Grab	5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/26/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/1/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/8/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/15/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/22/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/29/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/5/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/12/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/19/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/26/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/3/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/10/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/17/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/24/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/31/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/7/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/14/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/22/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/28/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/5/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/12/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/19/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/26/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/2/2007	Grab	<5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/9/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/16/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/23/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/30/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/6/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/13/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/20/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/27/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/6/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/13/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/20/2007	Grab	18.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/27/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/4/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/10/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/17/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/24/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/2/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/7/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/16/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/23/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/29/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/5/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/13/2007	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/19/2007	Grab	<5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/20/2010	FieldDupl	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/14/2010	FieldDupl	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/14/2010	FieldDupl	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/2/2010	FieldDupl	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/28/2010	FieldDupl	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/28/2005	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/4/2006	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/11/2006	Grab	23.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/18/2006	Grab	12.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/24/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/1/2006	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/9/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/16/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/23/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/1/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/21/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/30/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/18/2006	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/23/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/20/2010	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/23/2010	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/28/2010	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/24/2010	Grab	<5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/9/2010	Grab	<5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/2/2006	FieldDupl	78.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/2/2006	FieldDupl	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/13/2006	FieldDupl	66.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/13/2006	FieldDupl	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/7/2006	FieldDupl	50.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/7/2006	FieldDupl	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/29/2007	FieldDupl	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/29/2007	FieldDupl	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/17/2017	FieldDupl	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/31/2017	FieldDupl	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/10/2018	FieldDupl	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/12/1993	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/3/1993	Grab	0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/20/1993	Grab	15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/19/1993	Grab	20.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/27/1993	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/14/1993	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/4/1993	Grab	44.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/15/1993	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/24/1994	Grab	0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/15/1994	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/29/1994	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/12/1994	Grab	270.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/26/1994	Grab	3.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/7/1994	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/18/1994	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/25/1994	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/15/1994	Grab	0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/19/1994	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/30/1994	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/14/1994	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/31/1995	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/24/1995	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/22/1995	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/13/1995	Grab	18.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/12/1995	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/15/1995	Grab	16.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/11/1995	Grab	25.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/10/1995	Grab	19.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/15/1995	Grab	25.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/2/1999	Grab	<1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/8/2000	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/13/2000	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/8/2001	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/13/2001	Grab	12.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/23/2002	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/6/2002	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/14/2002	Grab	36.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/15/2002	Grab	<40.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/5/2002	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/18/2002	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/7/2003	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/10/2003	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/21/2003	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/7/2003	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/2/2003	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/18/2003	Grab	174.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/21/2004	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/15/2004	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/5/2004	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/8/2004	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/7/2004	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/2/2005	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/4/2006	Grab	14.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/27/2006	Grab	59.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/27/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/28/2006	Grab	57.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/29/2006	Grab	79.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/29/2006	Grab	103.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/30/2006	Grab	187.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/31/2006	Grab	162.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/1/2006	Grab	130.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/3/2006	Grab	71.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/4/2006	Grab	67.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/5/2006	Grab	56.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/6/2006	Grab	42.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/7/2006	Grab	45.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/8/2006	Grab	36.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/9/2006	Grab	30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/10/2006	Grab	30.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/11/2006	Grab	36.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/12/2006	Grab	34.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/21/2006	Grab	146.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/22/2006	Grab	69.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/23/2006	Grab	48.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/24/2006	Grab	64.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/25/2006	Grab	106.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/26/2006	Grab	25.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/28/2006	Grab	77.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/1/2006	Grab	95.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/2/2006	Grab	116.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/8/2006	Grab	87.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/9/2006	Grab	82.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/10/2006	Grab	526.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/11/2006	Grab	231.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/12/2006	Grab	528.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/13/2006	Grab	598.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/14/2006	Grab	290.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/15/2006	Grab	264.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/16/2006	Grab	179.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/17/2006	Grab	238.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/18/2006	Grab	179.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/19/2006	Grab	147.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/20/2006	Grab	121.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/21/2006	Grab	221.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/22/2006	Grab	110.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/23/2006	Grab	222.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/24/2006	Grab	194.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/25/2006	Grab	98.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/26/2006	Grab	69.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/27/2006	Grab	61.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/28/2006	Grab	65.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/29/2006	Grab	49.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/30/2006	Grab	72.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/31/2006	Grab	74.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/1/2006	Grab	77.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/2/2006	Grab	64.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/3/2006	Grab	67.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/4/2006	Grab	82.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/5/2006	Grab	105.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/6/2006	Grab	108.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/7/2006	Grab	94.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/8/2006	Grab	128.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/9/2006	Grab	86.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/10/2006	Grab	43.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/11/2006	Grab	85.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/12/2006	Grab	84.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/13/2006	Grab	109.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/14/2006	Grab	79.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/15/2006	Grab	85.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/16/2006	Grab	64.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/17/2006	Grab	87.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/18/2006	Grab	128.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/18/2006	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/19/2006	Grab	151.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/20/2006	Grab	186.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/21/2006	Grab	140.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/22/2006	Grab	134.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/23/2006	Grab	198.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/24/2006	Grab	286.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/25/2006	Grab	140.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/26/2006	Grab	259.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/27/2006	Grab	127.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/28/2006	Grab	94.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/29/2006	Grab	127.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/30/2006	Grab	189.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/1/2006	Grab	191.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/2/2006	Grab	389.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/3/2006	Grab	157.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/4/2006	Grab	157.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/5/2006	Grab	102.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/6/2006	Grab	337.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/7/2006	Grab	331.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/8/2006	Grab	237.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/9/2006	Grab	468.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/10/2006	Grab	220.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/11/2006	Grab	335.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/11/2006	Grab	71.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/12/2006	Grab	316.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/13/2006	Grab	104.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/14/2006	Grab	75.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/15/2006	Grab	44.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/16/2006	Grab	26.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/17/2006	Grab	84.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/18/2006	Grab	63.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/19/2006	Grab	72.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/20/2006	Grab	39.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/21/2006	Grab	34.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/22/2006	Grab	172.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/23/2006	Grab	54.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/24/2006	Grab	30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/1/2006	Grab	164.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/2/2006	Grab	88.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/3/2006	Grab	94.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/4/2006	Grab	121.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/19/2006	Grab	109.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/20/2006	Grab	516.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/20/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/21/2006	Grab	610.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/22/2006	Grab	194.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/23/2006	Grab	230.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/24/2006	Grab	187.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/25/2006	Grab	165.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/26/2006	Grab	233.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/27/2006	Grab	327.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/28/2006	Grab	208.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/29/2006	Grab	281.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/30/2006	Grab	305.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/1/2006	Grab	276.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/2/2006	Grab	300.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/3/2006	Grab	263.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/4/2006	Grab	302.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/5/2006	Grab	318.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/6/2006	Grab	281.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/7/2006	Grab	242.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/8/2006	Grab	214.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/9/2006	Grab	154.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/10/2006	Grab	173.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/11/2006	Grab	129.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/12/2006	Grab	137.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/12/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/3/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/3/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/11/2006	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/1/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/2/2006	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/3/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/4/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/5/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/6/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/7/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/8/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/9/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/10/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/11/2006	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/12/2006	Grab	0.6

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/13/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/14/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/15/2006	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/16/2006	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/17/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/18/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/19/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/20/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/21/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/22/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/23/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/23/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/24/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/25/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/26/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/27/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/28/2006	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/29/2006	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/30/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/31/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/1/2006	Grab	14.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/2/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/3/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/4/2006	Grab	4.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/5/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/6/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/7/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/8/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/9/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/10/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/11/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/12/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/13/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/13/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/14/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/15/2006	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/16/2006	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/17/2006	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/18/2006	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/19/2006	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/20/2006	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/21/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/22/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/23/2006	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/24/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/25/2006	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/26/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/27/2006	Grab	4.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/28/2006	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/29/2006	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/30/2006	Grab	46.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/1/2006	Grab	660.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/2/2006	Grab	2520.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/3/2006	Grab	1240.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/4/2006	Grab	556.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/5/2006	Grab	284.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/6/2006	Grab	354.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/7/2006	Grab	330.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/8/2006	Grab	168.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/9/2006	Grab	106.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/10/2006	Grab	62.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/11/2006	Grab	37.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/12/2006	Grab	37.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/13/2006	Grab	35.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/14/2006	Grab	30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/15/2006	Grab	19.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/16/2006	Grab	29.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/17/2006	Grab	44.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/18/2006	Grab	20.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/19/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/19/2006	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/20/2006	Grab	24.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/21/2006	Grab	40.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/22/2006	Grab	33.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/23/2006	Grab	30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/24/2006	Grab	23.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/25/2006	Grab	26.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/26/2006	Grab	13.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/27/2006	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/28/2006	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/29/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/30/2006	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/31/2006	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/1/2007	Grab	12.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/2/2007	Grab	13.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/3/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/4/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/4/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/5/2007	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/6/2007	Grab	18.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/7/2007	Grab	26.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/8/2007	Grab	34.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/9/2007	Grab	42.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/10/2007	Grab	46.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/11/2007	Grab	46.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/12/2007	Grab	126.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/13/2007	Grab	548.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/14/2007	Grab	975.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/15/2007	Grab	1270.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/16/2007	Grab	1090.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/17/2007	Grab	852.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/18/2007	Grab	617.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/19/2007	Grab	395.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/20/2007	Grab	293.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/21/2007	Grab	221.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/22/2007	Grab	164.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/23/2007	Grab	120.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/24/2007	Grab	80.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/25/2007	Grab	22.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/26/2007	Grab	18.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/27/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/28/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/29/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/30/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/31/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/1/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/2/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/3/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/4/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/5/2007	Grab	5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/6/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/7/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/8/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/9/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/10/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/11/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/12/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/13/2007	Grab	34.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/14/2007	Grab	258.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/15/2007	Grab	241.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/16/2007	Grab	164.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/17/2007	Grab	111.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/18/2007	Grab	90.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/19/2007	Grab	116.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/20/2007	Grab	66.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/21/2007	Grab	51.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/22/2007	Grab	19.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/23/2007	Grab	12.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/24/2007	Grab	13.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/25/2007	Grab	18.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/26/2007	Grab	21.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/27/2007	Grab	13.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	2/28/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/1/2007	Grab	8.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/2/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/3/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/4/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/5/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/6/2007	Grab	15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/7/2007	Grab	13.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/8/2007	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/9/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/10/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/11/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/12/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/13/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/14/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/15/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/16/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/17/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/18/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/19/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/20/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/21/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/22/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/23/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/24/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/25/2007	Grab	8.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/26/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/27/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/28/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/30/2007	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/31/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/1/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/2/2007	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/3/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/3/2007	Grab	20.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/4/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/5/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/6/2007	Grab	7.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/7/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/8/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/9/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/10/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/11/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/12/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/13/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/14/2007	Grab	38.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/15/2007	Grab	71.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/16/2007	Grab	32.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/17/2007	Grab	23.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/18/2007	Grab	13.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/19/2007	Grab	15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/20/2007	Grab	15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/21/2007	Grab	49.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/22/2007	Grab	79.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/23/2007	Grab	68.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/24/2007	Grab	58.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/25/2007	Grab	76.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/26/2007	Grab	104.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/27/2007	Grab	100.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/28/2007	Grab	79.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/29/2007	Grab	68.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	4/30/2007	Grab	58.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/1/2007	Grab	49.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/2/2007	Grab	122.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/3/2007	Grab	721.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/4/2007	Grab	1300.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/5/2007	Grab	1410.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/6/2007	Grab	983.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/7/2007	Grab	535.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/8/2007	Grab	270.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/9/2007	Grab	147.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/10/2007	Grab	33.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/11/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/12/2007	Grab	2.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/13/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/14/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/15/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/16/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/17/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/18/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/19/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/20/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/21/2007	Grab	9.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/22/2007	Grab	29.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/22/2007	Grab	83.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/23/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/24/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/25/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/26/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/27/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/28/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/29/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/30/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/31/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/1/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/2/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/3/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/4/2007	Grab	0.9

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/5/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/6/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/7/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/8/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/9/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/10/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/11/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/12/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/13/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/14/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/15/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/16/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/17/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/18/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/19/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/20/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/21/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/22/2007	Grab	0.4
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/23/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/24/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/25/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/26/2007	Grab	0.4
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/27/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/28/2007	Grab	0.7

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/29/2007	Grab	0.4
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/30/2007	Grab	0.4
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/1/2007	Grab	0.4
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/2/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/3/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/4/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/5/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/6/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/7/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/8/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/9/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/10/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/11/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/12/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/13/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/14/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/15/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/17/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/18/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/19/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/20/2007	Grab	0.9
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/21/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/22/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/23/2007	Grab	1.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/24/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/25/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/26/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/27/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/28/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/29/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/30/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/31/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/1/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/2/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/3/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/4/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/5/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/6/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/7/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/8/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/9/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/10/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/11/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/12/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/13/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/14/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/15/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/16/2007	Grab	0.6

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/17/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/18/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/19/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/20/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/21/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/22/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/23/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/24/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/25/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/26/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/27/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/28/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/29/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/30/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/31/2007	Grab	0.7
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/1/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/2/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/3/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/4/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/5/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/6/2007	Grab	0.6
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/7/2007	Grab	0.5
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/8/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/9/2007	Grab	5.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/10/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/10/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/11/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/12/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/13/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/14/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/15/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/16/2007	Grab	3.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/17/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/18/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/19/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/20/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/21/2007	Grab	1.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/22/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/23/2007	Grab	4.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/27/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/28/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/29/2007	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/30/2007	Grab	63.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/1/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/6/2007	Grab	2.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/11/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/16/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/21/2007	Grab	3.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/26/2007	Grab	0.8
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/31/2007	Grab	11.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/5/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/10/2007	Grab	6.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/15/2007	Grab	10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/20/2007	Grab	5.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/25/2007	Grab	8.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/27/2007	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/30/2007	Grab	14.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/5/2007	Grab	16.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/10/2007	Grab	63.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/15/2007	Grab	317.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/20/2007	Grab	19.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/25/2007	Grab	120.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	12/30/2007	Grab	42.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/14/2008	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/11/2008	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/7/2008	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/8/2008	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/9/2008	Grab	<10.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/13/2009	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/3/2009	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/26/2009	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/6/2009	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/8/2009	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/27/2009	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/19/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/9/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/26/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/27/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/7/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/28/2010	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/11/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/22/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/11/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/13/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/5/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/7/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/18/2011	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/3/2012	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/6/2012	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/9/2012	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/16/2012	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/4/2012	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/10/2012	Grab	<30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/29/2013	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/19/2013	Grab	21.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/29/2013	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	6/10/2013	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/15/2013	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	8/7/2013	Grab	31.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/16/2013	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	11/12/2013	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/13/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/24/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/13/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/29/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/16/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/20/2014	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/27/2015	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/17/2015	Grab	<30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/26/2015	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/21/2015	Grab	<30.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/1/2015	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/14/2015	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/20/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/2/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/3/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/5/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/6/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/18/2016	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	3/22/2017	Grab	<15.0

Site Code	Site Name	Date	Sample ²¹ Type	TSS (mg/l)
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/31/2017	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/7/2017	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	10/30/2017	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	1/16/2018	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	5/1/2018	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	7/23/2018	Grab	<15.0
2732/10.5	Black R. nr. Annapolis, @Hwy K Bridge	9/4/2018	Grab	<15.0